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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1984

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

NINETY-EIGHTH CONGRESS

FIRST SESSION

ON

H.R. 3132

AN ACT MAKING APPROPRIATIONS FOR ENERGY AND WATER DEVELOPMENT FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1984, AND FOR OTHER PURPOSES

PART 3 (Pages 1313–2075)

NONDEPARTMENTAL WITNESSES

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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1984

WEDNESDAY, MARCH 23, 1983

U.S. Senate,
Subcommittee of the Committee on Appropriations,
Washington, D.C.

The subcommittee met at 10:10 a.m. in room SD-192, Dirksen Senate Office Building, Hon. Mark O. Hatfield (chairman) presiding.

Present: Senators Hatfield, Cochran, Stennis, and DeConcini.

NONDEPARTMENTAL WITNESSES

SUBCOMMITTEE PROCEDURE

Chairman Hatfield. The subcommittee will come to order.

We have a large number of witnesses that wish to be heard this morning, so in accordance with our notification to each of the witnesses, it will take some self-restraint by each of you for oral testimony to be held to a minimum so that all of you who have requested an opportunity to testify can be heard. In keeping with our wishes, I ask that your prepared statements be submitted for the record where they will be carefully reviewed. That is the record the subcommittee will study to determine the judgments and recommendations for the upcoming year.

Also, this way we will have a carefully detailed record so anyone not present can arrive at an independent judgment. So, if each witness will summarize the important points in his oral testimony it will be helpful.

We will now proceed to call our first witness, the Governor of Arizona, Mr. Bruce Babbitt, who will be introduced by Senator DeConcini, who is a member of the Appropriations Committee. I believe we also have the former minority leader of the House of Representatives, Congressman John Rhodes.

Nice to have you, John.

Senator, would you please proceed to present your Governor.

Central Arizona Project

STATEMENT OF HON. DENNIS DeCONCINI, U.S. SENATOR FROM ARIZONA

Senator DeConcini. Chairman Hatfield, thank you, and let me express great appreciation for the time you have given on this subject matter and the fairness which you have always provided, not only all of us from Arizona, but those concerned with the reclamation program in general. It is a pleasure for me to be here. Before I introduce the Governor I want to call to the attention of the committee the 1984 budget request, which is before us now, is $165.6 million. When you look at this amount, in comparison to the statements of Secretary Watt, who has indicated that there is going to be slippage in the Central Arizona Project because of the funding level contained in the continuing resolution that was passed for the year 1983; and a budget request for 1984 of only $165 million, you will hear later from the Governor that there is strong justification for an appropriation in excess of $200 million for 1984.

I would like the record to point out that the Bureau of Reclamation, Mr. Broadbent on the record of this committee has indicated that they have a capability of more than $200 million—to be exact, $206 million for 1984, and the administration has not come forward with a request for that amount. I hope that the testimony today will be persuasive to this committee that it is in the best interest of this project and in the best interest of the United States to finish this project because of the escalating costs that have gone on, and that we can have full funding of the Bureau's capability for 1984.

We have a distinguished group here today, Mr. Chairman. As you mentioned, former minority leader of the House of Representatives, John Rhodes, it does not seem right to have a hearing on the CAP without having John as a member of the delegation. We are pleased he is still actively involved.

We will also hear from Mayor Lewis Murphy of the city of Tucson and a group of concerned citizens that are most interested in that part of the Central Arizona Project.

PREPARED STATEMENT OF SENATOR GOLDWATER

Chairman HATFIELD. Would you yield? I also have a statement from your colleague, Senator Goldwater, that I would like to enter in the record at this point.

[The statement follows:]

STATEMENT OF SENATOR GOLDWATER

The history of the Central Arizona Project can be characterized as a long series of mileposts. The Supreme Court's decision in *Arizona* v. *California* was one of the earliest mileposts. That decision, in 1963, ended more than a decade of litigation and guaranteed Arizona's share of the Colorado River.

The passage of the Colorado River Basin Project Act 5 years later, in 1968, was another important milepost. Another important date, 1971, marked commencement of construction of the project. At last the project was more than a blueprint.

There have been countless other memorable events and dates in the history of the project and before the entire project is complete there will undoubtedly be several others.

The year 1983 has already seen some significant mileposts: In February of this year, Secretary Watt formally announced allocations of water to municipal and industrial customers, to irrigators, and to Indian tribes. This decision finalizes a process of deliberation that was begun by former Secretary Kleppe in 1976. The allocation decision permits the CAWCD to enter into contracts to deliver CAP water to individual water users. All of this moves us one step closer to the day Colorado River water is actually delivered to Arizona and repayment of the project begins.

Phoenix is close to that long-awaited delivery date. Construction of the Granite Reef aqueduct is on schedule, and the Bureau of Reclamation assures us that water will arrive in Phoenix in 1985.

Delivery dates for Pinal County and Tucson are, unfortunately, not as certain. Prior to enactment of the continuing resolution, and the President's fiscal year 1984 budget request, water had been due to arrive in Pinal County in 1987 and in Tucson by 1989 or 1990.

Reduced funding levels, however, forced several construction contracts on the Salt-Gila and Tucson aqueducts to slip. According to the Secretary, that slippage may result in a slight delay in delivery to Pinal County and as much as 2 to 3 years of delay in delivery to Tucson. Unless Congress acts to restore funds to the CAP and to maintain a funding level adequate to reinstate the delivery schedule, the 1987 and 1990 delivery dates cannot be met.

The Arizona congressional delegation is committed to completion of the main aqueduct system as the first priority for the CAP; to securing funds necessary to reinstate the slipped contracts and to proceed on a schedule of construction that assures the 1987 and 1990 delivery dates; and, to assuring that construction and repayment of the aqueduct is in conformity with existing reclamation law.

Specifically, I urge this subcommittee to appropriate approximately $180 million in fiscal year 1984 for the CAP, and not less than $15 million of those funds be specifically directed toward evacuation and construction of the Picacho, Red Rock, and Brady pumping plants, purchase of pumps and motors for those plants, acquisition of rights-of-way for reaches 1, 2, and 3 of Tucson phase A, and construction of reach 1 of Tucson phase A beyond the first 4 miles or to the maximum of the Bureau's capability.

Mr. Chairman, you are no doubt aware that the Arizona congressional delegation has, traditionally, been united in support of the Central Arizona Project. Although we may have very different views on other issues, the CAP knows no partisanship. We are together in the spirit of unity and in support of common goals.

The people of Arizona have been served very well by this committee and we appreciate the time, the interest, and the consideration we have received here.

Central Arizona Project

STATEMENT OF HON. BRUCE BABBITT, GOVERNOR OF ARIZONA

Senator DeConcini. Mr. Chairman, Governor Babbitt is well known to this committee and throughout the West as being a strong proponent of physical reclamation, and one who is deeply concerned with the environment. This, to me, brings to this committee someone who can speak in a most proper manner, distinguishing the needs and why the Central Arizona Project should have some consideration from this committee above and beyond what is included in the 1984 budget.

Governor Babbitt has recently been reelected by, I believe, a large majority, the largest majority in the State of Arizona. He has brought leadership to our State, he has shepherded through the legislature a recodification of the Arizona water law, the second in our State, and it is a pleasure to introduce to you, Mr. Chairman, Governor Bruce Babbitt.

Governor Babbitt. Mr. Chairman, thank you.

At the outset, I would like to submit for the record a prepared statement, a very important statement of support from the Metropolitan Water District of Southern California, and ask your leave to file a statement within the next 48 hours from the Central Arizona Water Conservation District.

Chairman HATFIELD. Happy to have those—they will be made part of the record, along with your full statement.

Governor BABBITT. Thank you.

[The statements follow:]

STATEMENT OF GOV. BRUCE BABBITT OF ARIZONA

OVERVIEW

1. The testimony states, "The investment of public funds in water supply projects is not something that can be ignored or postponed without inviting immediate and long-term damage. The effects include loss of jobs, economic stagnation, delay of project cost repayment to the Federal Treasury, and increases in project construction costs."

2. Calls for fiscal year 1984 funding:
   - —Central Arizona Project (CAP) request for $200 million for main aqueduct and related features construction and distribution system development including $15 million for funding of construction of the entire reach 1 of the Tucson aqueduct including pump stations and right-of-way acquisition for reaches 2 and 3. (President Reagan's budget requests for the CAP total $165.6 million.)
   - —Support for the President's request of $32,930,000 for salinity control of the Colorado River.
   - —Support for the President's request for $1.2 million for concrete lining of Roosevelt Water Conservation District delivery system and $3.2 million for a loan to the Roosevelt Irrigation District for relining parts of the delivery system.
   - —Support for the President's request for $400,000 to the Yuma-Mesa and Unit B Irrigation and Drainage District.
   - —Support for the President's request of $13,034,000 for flood control construction and planning for Indian Bend Wash, New River, Rillito River, Nogales Wash, and Gila River.
   - —Request U.S. Army Corps of Engineers funding for flood control design memorandum for Holbrook, Ariz.
   - —$300,000 for an interim investigation by the Corps and BUREC for flood control for the upper Gila River.

3. Emphasizes the need to complete the aqueduct to southern Arizona to assure settlement of the Papago Indian Tribe water claims and to optimize project repayment.

I am pleased to appear before this committee for the sixth consecutive year to urge appropriation of funds to continue construction of the Central Arizona Project.

In these financially troubled times, governments at Federal, State, and local levels are all engaged in a grave and necessary struggle to prioritize the spending of public funds in order to maximize the basic effectiveness of every dollar spent. This process in which we are involved is particularly demanding of prudence where the development of economically essential natural resources such as water are involved. The investment of public funds in water supply projects is not something that can be ignored or postponed without inviting immediate and long-term damage. The effects include loss of jobs, economic stagnation, delay of project cost repayment to the Federal Treasury, and increases in project construction costs.

I am here today to support the appropriation of funds to continue construction of Central Arizona Project as nearly on schedule as possible with the conviction that my request is fiscally responsible even in light of present economic conditions.

Federal investment to date in the authorized Central Arizona Project amounts to approximately $1 billion; and construction has proceeded to a point that it is reasonable to expect that deliveries of water into the Phoenix metropolitan area and environs from the 190-mile Granite Reef aqueduct feature of the project can begin in 1985.

As significant as this accomplishment will be, we must, however, look beyond it to the timely completion of the remaining features of the project; the 58-mile Salt-Gila aqueduct, which has been started; the Tucson aqueduct and the regulatory and flood control features of plan 6, the alternative to Orme Dam, none of which have been started. Our repayment obligation does not begin until all features of the main delivery system have been completed, hence, it apears that completion of all features as quickly as possible would best serve the national financial interest.

While the President's request for the CAP of $165.6 million may appear appropriate under the budgetary circumstances facing our country, it falls woefully short of what is needed to complete the project on a reasonable time schedule. Construction began in fiscal year 1972. Eleven years later the project is only 38 percent completed. Because of inflation the estimated cost of the completed project has doubled and then doubled again. To complete the project on schedule by 1992 will require an average annual appropriation of approximately $267 million, or $100 million per year more than we have been receiving and has been requested for fiscal year 1984 by the President.

I ask your support for an appropriation of $200 million; $180 million for main aqueduct and related features construction and $20 million for distribution system development. Bureau of Reclamation capability should be augmented by contracting to the private sector if necessary. I further request that you direct the Secretary, in addition to the work programed in the President's request, to undertake full construction of canal reach 1 of the Tucson aqueduct, acquisition of right-of-way in reaches 2 and 3, and construction of the Picacho, Brady, and Redrock pumping plants, including contracts for the pumps and motors at these three plants at a funding level not less than $15 million. Completion of the aqueduct to Tucson is of the highest priority if we are to be assured of settlement of the Papago Indian water claims and to optimize repayment of the project.

To remain a viable supply for the Central Arizona Project and useable in southern California, southern Nevada, and Mexico, the salt content of the Colorado River must be controlled. To this end I urge support of the President's budget request for title I of the salinity control program in the amount of $21,872,000 and $11,058,000 for title II construction.

I would ask favorable consideration of the amount identified in the President's budget for concrete lining of 16½ miles of the Roosevelt Water Conservation District delivery system and $3.2 million for a loan to the Roosevelt Irrigation District to continue the relining of 31 miles of the district's water delivery system. Both of these improvements will save energy and water in an area of our State where groundwater is being mined at twice the rate of replenishment and maximum water conservation is essential to its future.

Once again I would ask favorable consideration of the request of the Yuma-Mesa Irrigation and Drainage District, Gila project, and the Unit B Irrigation and Drainage District, Yuma auxiliary project for the appropriation of $400,000. These funds would be used under the district's existing repayment and rehabilitation and betterment obligations to the United States to install an additional regulatory pump and additional pumping capacity at the Yuma-Mesa pumping plant and to reimburse Yuma-Mesa for unit B's share of the cost of the rehabilitation of the existing motors at the plant. The installation of the proposed additional regulatory pump would permit the pumping plant to better accommodate the schedule of pumping demands and would permit considerable savings of energy.

Finally, I would like to take this opportunity to support the appropriation requested in the President's budget for flood control activities of the Corps of Engineers in Arizona. The request of $13,034,000 would fund badly needed flood control construction on Indian Bend Wash and New River in the Phoenix metropolitan area and flood control planning studies for the Rillito River in Tucson, Nogales Wash at Nogales, and the Gila River near Safford.

The Corps' budget request does not include two planning studies which we believe should receive additional funding. The community of Holbrook in northern Arizona continues to live under the threat of major flood damages. Feasibility studies have been completed and a project found feasible. Nevertheless, the budget request of the Corps contains no funds for preparation of a general design memorandum. I appeal to you to appropriate funds so the Corps can prepare the memorandum and this needed project can move into construction.

The budget request for the upper Gila interim investigation is inadequate to support the studies necessary for timely completion. This investigation is a cooperative effort between the Bureau of Reclamation and the Corps of Engineers. For the Corps to do their part, an additional $150,000 is necessary.

I thank you for the opportunity of appearing before you today. Water is essential to Arizona's continued economic growth. We hope you will understand the urgency of our need and will make the appropriations necessary to complete the Central Arizona Project on schedule.

I will leave you with this thought. The fact that the project must be completed seems obvious, and the sooner the better. Expediting construction will minimize cost increases due to inflation and will maximize job opportunities at a time when we need to put our people back to work.

STATEMENT OF THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

The Metropolitan Water District of Southern California appreciates this opportunity to testify in support of appropriations for fiscal year 1984 for the Central Arizona Project. With completion of the initial stages of the project targeted for 1985 when first deliveries of water to the Phoenix area are anticipated, funding levels must be maintained to keep this project on schedule.

Legislation authorizing the Central Arizona Project was signed by President Johnson on September 30, 1968. First deliveries of water from the project will be made 17 years after that authorization and completion of the system in, perhaps, as much as 20 years. While there are many demands on the budget, funds ought to be appropriated consistent with the Bureau of Reclamation's capability to complete the project in a timely fashion. Further, at a time of high unemployment, particularly in the construction industry, projects ready for award must be given high priority.

We urge the committee's careful consideration of funding for the Central Arizona Project and support the request of Governor Bruce Babbitt of Arizona.

STATEMENT OF DALE SHUMWAY, PRESIDENT, CENTRAL ARIZONA WATER CONSERVATION DISTRICT

I am Dale Shumway, president of the Central Arizona Water Conservation District. This statement is presented on behalf of that district which is the entity under contract with the United States to repay the major portion of the reimbursable costs of the Central Arizona Project. Within the last 3 months, the district has also consummated a contract with the United States which calls for the district to provide operation and maintenance services for the project.

Our interests in timely completion of the project facilities are real and immediate. We appreciate the identification of $165.6 million for CAP in the administration's budget request but feel that this amount would fall short of keeping us on an optimum path to project completion. We support 100 percent the request of our Governor, Bruce Babbitt, for a 1984 appropriation of $200 million for CAP. We also think it is important that the Congress indicate that a portion of the appropriation is intended for use on phase A of the Tucson Aqueduct below the first 4.4 miles. Appropriation at this level, and with this direction, is essential to move the project forward on a schedule that meets the commitments which the Federal Government has made to the citizens of our area.

The Governor had indicated that $20 million of the $200 million for fiscal year 1984 should be used for distribution systems. This is an especially important element of our Arizona position. We need distribution system funds available in significant amounts in fiscal year 1984. In the waning days of the last session of Congress, legislation was passed which requires that 20 percent of the funding of the non-Indians distribution systems be provided from non-Federal sources. This was a breakaway, a major change, from a long-standing process wherein all funding of distribution came from Federal appropriations. Our irrigators have begun to gather their required 20 percent; they have incurred considerable expense in preparing to participate in the terms Congress set forth, and now they need to see the United States come through with its share of the bargain.

I'm sure that our concerns will be given full consideration by the committee. Thank you for the opportunity to present those concerns to you.

PROJECT IMPORTANCE AND DESCRIPTION

Governor BABBITT. Let me, at the outset, express a great sense of gratitude that we Arizonians feel with the course of the Central Arizona Project. This project is literally our future, our lifeline. Arizona cannot continue to grow, to find its place in the Sun without water from the Colorado River.

The fight for this project has consumed the energies of generations of Arizonians in both political parties. We are now seeing the fruits of that effort.

The Colorado River water will flow into the Phoenix area in 1985; the aqueducts, some 200 miles long, are now on the threshold of completion into the Phoenix Metropolitan Area. That is an enormous task very well done by the Bureau of Reclamation.

With that, we turn to the remaining pieces of the project as authorized and necessary to have a functioning integrated reclamation project. There are essentially three pieces remaining. First is the extension of the aqueduct from the Phoenix area into Tucson. The importance of that I would state in this way. Tucson, Ariz., to our knowledge, is the largest city on this planet without one drop of surface water supply.

This aqueduct would be the first surface water and, indeed, the only surface water supply that this large, expanding, dynamic city will ever have.

The other pieces of the project are agriculture systems. The project is both urban water supply and an agriculture reclamation project that must continue to work on completion of distribution systems between Phoenix and Tucson.

The third piece authorized in the Central Arizona Project legislation is regulatory storage and flood control, principally on the rivers above Phoenix.

It is important that we move this project with a funding pattern that brings the remaining three pieces to conclusion in a timely fashion in the right sequence optimizing the project repayment and integrated project.

BUDGET REQUEST FOR 1984

Senator DeConcini suggested, Mr. Chairman, and we believe the entire $200 million would be appropriate for fiscal 1984. The project has been slipping. We understand that, that is part of the reality of the recent past. If there is any way for this committee to reach the target of $200 million it would help us to keep this project on its way to completion.

Now, with the $200 million request, and bearing in mind the three pieces remaining, we would ask that 90 percent of that money, 90 percent of the appropriation, whatever level, in this case $180 million, be earmarked to keep the canal moving out of the Phoenix area toward Tucson. That canal must reach Tucson by 1990. Our State water plan of the municipal planning for Tucson, the implementation of water settlements has been put in place, and it requires we keep that aqueduct on schedule.

The remaining $20 million we would ask for the continuation of work on agriculture distribution systems. That is another piece of the project which will continue to increase in importance as we move toward completion.

TUCSON AQUEDUCT

A special word about the city of Tucson and this aqueduct. The section's memorandum for fiscal 1984 stops work on the aqueduct at a turnout called Maracopas; in effect, it stops work at the end of the agriculture area without any authority to begin the advanced work necessary on the final phase of Tuscon Aqueduct.

We would respectfully ask this committee to specify in the appropriations that we get moving on the final phase of Tucson, and that $15 million be earmarked for the Tucson Aqueduct for the acquisition of rights-of-way and the advanced work necessary for the three specific pumping plant sites—Picacho, Brady, and Redrock—and the importance of this is that the lead time to get the pumping stations up and get contracts out is critically important for them to reach this 1989–90 deadline. We estimate that $15 million of the appropriation of whatever level would be apppropriately, indeed urgently, required for that work on the Tucson Aqueduct and requested in order to not have ambiguity, we would direct the money should be spent in that fashion.

I would just add for the record that the cooperation we have had from the Bureau of Reclamation has been magnificent. They have been highly responsive to State water plans, to the need to set priorities, and to urgently work with us in completion of this project.

Lastly, Mr. Chairman, a brief word or two about some of the other items in the President's request.

COLORADO RIVER BASIN SALINITY CONTROL PROJECTS

I would support vigorously the President's budget request for some $32 million for salinity control on the Colorado River. That is, of course, a request supported by all of the basin States and we share a common interest in salinity control; it will benefit all of us.

CORPS FLOOD CONTROL PROJECTS

Lastly, the President has requested some $13 million to finish up, move toward completion flood control problems of programs of the Phoenix area.

There are two small projects that were omitted from the President's request: one for the community of Holbrook, Ariz., and one on the upper Gila. Both involve very small amounts of money for design and engineering and the details are in my request, and we would urge you to consider the case as carefully as you can.

Mr. Chairman, there are many others here to testify and they can fill in the details. I would simply end by expressing our gratitude. The CAP is a big project; it is our lifeline. It is moving along, we are seeing tangible results, we have still got a long way to go, we need your help and we are very grateful for it.

Thank you.

Chairman HATFIELD. Thank you, Governor, this is indeed a very significant project, about $3 billion. You don't consider this——

Governor BABBITT. If we had as much rain as Oregon did, I would consider it important. Until those specific storms move south, we will be back every single year.

Chairman HATFIELD. Governor, as you know, perhaps I participated in the authorization of this project back in 1968 as a member of this committee or of the Senate Interior Committee at that time.

We heard some of these same statements made by Arizonians about this copious water from Oregon. It might be possible to transfer it through some great engineering feat from the Pacific Northwest to the Southwest.

As you know, Senator Jackson, Senator Church, and I were successful in placing a moritorium on any water transfer programs, and that 10 years was up in 1978 and we have now made it permanent law, I believe. I just want to take this occasion to reiterate what we have done many times before, and that is I am happy to help on the Central Arizona Project, provided that you will only source your water supplies within the region and not look with envious eyes to our area [laughter].

Governor BABBITT. Mr. Chairman, I can't help note the entire surface water available to the State of Arizona, even after completion of this project, will be less than 5 million acre-feet, probably about 4 million, and I must tell you when I fly into Portland and see 200 million acre-feet of that magnificent water running to the Pacific, I must tell you the envy will be there, but I will heed your admonition.

Senator DECONCINI. If I could add, I learned the first year I was here of that prohibition put in in 1963 and realized the outstanding support we have had from the Senators from Oregon and Washington, and never mentioned, never even—well, it would not be truthful to say I didn't think about it.

Chairman HATFIELD. Well, we want to be helpful.

Senator DECONCINI. I don't even lust for that water.

Chairman HATFIELD. Senator, I just want to say, and Governor, we are most anxious to be helpful, and if it gets to the point you really feel your expanding population cannot be adequately provided for without more of this water, just send us the grocery list and we will raise it and ship it to you from the Northwest rather than shipping our water to you.

AGRICULTURE DISTRIBUTION SYSTEM FUNDING

Governor, you have asked, and testified this morning, on the $20 million part of the budget for distribution systems I believe.

Could you tell me what progress is being made at the local level as far as developing the local sponsors necessary to fully fund this part of the project? According to the information I have, that has not really been accomplished.

Governor BABBITT. Mr. Chairman, as you well know, our requirements built into the present law, these agriculture distribution systems, with agriculture and its current state, raising of the local fare has been a very difficult process. It has happened. Several of the districts actually laid out firm plans for their local share, particularly the ones on the western end of the project where the water would be coming first.

I am confident that we will be able—I vow to you that we will match our legal requirements as this project progresses. We have absolutely no choice, it will be done; it will be done at considerable hardship.

The other reason these distribution systems are critical is that in both the President's request and Arizona's, half of that money will go for Indian distribution systems to carry out commitments being made by the Secretary for the Indian tribes of central Arizona, and we are mortgaged to each other in a sense, and the support will be there.

STATUS OF REPAYMENT CONTRACTS

Chairman HATFIELD. Governor, have the local sponsors signed repayment contracts yet for this distribution system?

Governor BABBIT. Mr. Chairman, the signing of contracts was step 2 behind the allocation of water. The issue of allocations, of allocating the water, has been hanging fire for about 6 or 7 years. I am pleased to tell you that we finalized the allocation approximately 60 days ago. Contract negotiations are now underway, that precondition now having been settled, and I am confident that those contracts will be in place in due course.

Chairman HATFIELD. Governor, I must tell you the House of Representatives has some rules and procedures that are far different from ours in the Senate, and they are very strictly applied. One prohibits the appropriation of money contingent on some other action. We have just finished a conference on the emergency jobs bill in which a provision that we had inserted in the jobs bill was deleted in the conference because of the very strict rules of procedure exercised by the House.

I am not very optimistic about that particular request or that part of the request that you made, not necessarily based on the Senate tradition, we have frequently done this, but we have consistently lost those actions in conferences with the House. So I would think that maybe that signal to you today might be helpful to you in Arizona to get these contracts expedited, get them signed.

Governor BABBIT. Senator, I hear you very carefully and I am grateful for your advice.

Chairman HATFIELD. Governor, I know that you have many problems and this is quite a trip to come back here to testify, and I certainly recognize the priorities you place on this project by your presence here today. I assure you I am personally sympathetic to the Central Arizona Project. We had a saying here in 1968, "We need this, good old Carl," and it was sort of a farewell present to Carl Hayden who served in the Senate from the beginning of statehood, and that was one of the great privileges I had getting here in time to serve as his colleague, and your distinguished Senators you have sent here since that time—I am happy to be a friend of Arizona and a friend of your Senators.

Governor BABBIT. Thank you very much, Senator.

Chairman HATFIELD. Senator DeConcini has already introduced the mayor of Tucson.

Mayor Murphy, if you would come forward, please.

STATEMENT OF LEWIS C. MURPHY, MAYOR OF TUCSON, ARIZ.

Mayor MURPHY. Thank you very much. I am Lew Murphy, the mayor of Tucson, I have with me the vice mayor——

Chairman HATFIELD. Could the press be a little quiet, please?

Mayor MURPHY. On my right is Mr. Brent Davis, and on my immediate right, Mr. Buck O'Rielley, the president of the Southern Arizona Water Users Association, representing a broad-based water using constituency; and on his right, Mrs. Marybeth Carlile, executive director of that organization.

Chairman HATFIELD. We welcome you all here.

Mayor MURPHY. We appreciate the opportunity to appear before you this morning.

First, on behalf of the people of the city of Tucson, we want to express our thanks and keep appreciation for the funding support which this committee has historically given to the Central Arizona Project.

Second, we are here, as you are aware this morning, to attempt to put into specific focus the emphasis on the Tucson leg of the Central Arizona Project aqueduct.

We share the concerns which the Governor so carefully articulated to this committee with respect to total funding requests.

In the Governor's request he included, and I believe spoke specifically with respect to $15 million over and above the administration's recommended budget request for the specific purpose of commencing the Tucson Aqueduct.

As the Governor indicated, our city of approximately 550,000 people today is supported solely by the ground water resource. We have no surface water and no other water available to us at this time, which means that we need a series of solutions to our long-range water requirements, each acting simultaneously or interacting with each other in order to meet our mandated goal in the year 2025 of eliminating the overdrafting of the underground supply.

Our population, Mr. Chairman, grew about 50 percent in the decade from 1970 to 1980. Our professional planners indicate that it will probably double the present population in the next 20 years. I think it is obvious that the continuation of the Central Arizona Project is of mandatory importance in terms of our communities' requirements and may well be our life blood for the future.

The goal of the Tucson Active Management Area under the 1980 ground water law is a balance between the recharge and the withdrawals by the year 2025.

The Tucson segment of that leg is mandatory and crucial in bringing the ability of our community to meet those needs, as well as those legal requirements.

The project has moved along very well to the point of completion or its point of present construction in the Phoenix-Maricopa Valley.

The Bureau of Reclamation has done an outstanding job. We are concerned in the Tucson area with respect to the commencement of that leg, of the aqueduct, recognizing that the first priority for the completion of the project is the completion of the aqueducts.

This last year, the Bureau of Reclamation planned on commencing in this fiscal year construction of the Picacho pumping station, which is the commencement of phase A of the Tucson Aqueduct.

This year, the Bureau advises us it is capable in the next fiscal year of beginning work on three pumping plants, including pumps, pump motors, and possible right-of-way acquisition.

Because of the continuing resolution under which this project has been funded for the last year, there has been a deferral of the aqueduct. The Bureau now presently plans to commence construction of only 4.4 miles of the Tucson Aqueduct, which is basically the southernmost reaches of the Maricopa turnout on the Gila-Salt leg of the aqueduct and is technically not a commencement of that leg.

The addition of the $15 million which the Governor spoke of and which we are here this morning to address, Mr. Chairman, would be designated specifically for work on reaches 1, 2, and 3 of phase A of the aqueduct, which would bring it back on its construction timetable.

We are very concerned that the level of funding proposed by the administration in its original bill would not allow—not only not allow commencement of the phase A of the Tucson Aqueduct, but actually result in additional slippage of anywhere from 2 to 3 years.

The State of Arizona, Mr. Chairman, I feel is completely unified, the Governor, the Central Arizona Water Conservation District, and the people of the State of Arizona, including all of the identifiable water users have endorsed the position that the completion of the project, the completion of the aqueduct, the backbone of the project, if you will, is a paramount priority. Certainly it is in terms of our State's obligation, and ability to repay the Federal Government for the construction financing, and as you recognize the industrial water users will be paying, we estimate initially, something in the neighborhood of $50 per acre-foot, about $48 per acre-foot higher than the agriculture rates.

We, therefore, emphasize and wish to tell you what the Governor brought to your committee, by way of thanks and by way of emphasizing the relative importance of an additional $15 million in construction appropriations for the coming fiscal year.

We are also concerned that the slippage which was caused this year, Mr. Chairman, by the continuing resolution, not occur again this year, or in the event of a continuing resolution, that the Bureau of Reclamation be specifically directed to commence the construction and equipment acquisition for phase A of the Tucson area.

I believe that is my community's message, Mr. Chairman. Again, we appreciate the support this committee has given this project historically, and particularly the people of Tucson recognize, and are extremely grateful for, the continuing appropriation and sense of responsibility and commitment of the people of the United States to the entire Central Arizona Project.

I would conclude my comments and be pleased to attempt to reply to any comment you might have, and failing that, I would introduce Mr. Buck O'Rielly, the president of the Southern Arizona Water Users Association.

Chairman **Hatfield**. Thank you, I would be happy to hear from other people if we can be very brief.

[The statement follows:]

STATEMENT OF MAYOR LEWIS C. MURPHY, TUCSON, ARIZ.

I appreciate this opportunity to appear before you on behalf of the people of Tucson--first to express our thanks for the funding support your Committee has given over the years to the Central Arizona Project, and second to ask your help in putting the construction of the main aqueduct back on schedule after the slippage caused by the fiscal 1983 Continuing Resolution.

The City of Tucson is one of the largest metropolitan areas in the United States wholly dependent upon groundwater for its continued existence. Although the citizens of Tucson have, through voluntary conservation programs, reduced their average daily per capita water demand from 205 gallons in 1974 to 160 gallons in 1982, current demand for water exceeds renewable supplies by a ratio of more than two and one half to one.

Tucson is also one of the fastest growing cities in the country. In the ten year period between 1970 and 1980, the population of the Tucson metropolitan area grew from 340,000 to 519,000, an increase of 52%. In his best selling book, Megatrends, John Naisbitt predicts that Tucson in the next decade will be one of the ten cities of greatest opportunity in the United States. Realization of this vision of a growing, healthy urban center in Southern Arizona depends upon a stable, long term supplemental water supply for the area.

As stewards of the resources of this region for our children and their descendants, Arizona adopted in 1980 a groundwater code which established a long range program for stabilizing underground water supplies. The Code designates four geographic units as Active Management Areas (AMA). The Tucson Active Management Area encompasses the Upper Santa Cruz

Valley Basin and the Avra/Altar Valley Basin--current sources of the City's water and the basins from which the mines, farms and Papago Indian Tribe in the Tucson area derive their water supplies,

The goal of the Tucson Active Management Area, under the 1980 code, is safe yield, that is, a balance between recharge and withdrawals by January 1, 2025.

The crucial element for achieving this balance is the delivery of Colorado River water to Southern Arizona through the Tucson Aqueduct. The aqueduct was initially scheduled for completion in 1988. Last year it was estimated that if the fiscal 1983 appropriation had been adopted as this Committee reported out the bill, the Bureau of Reclamation could have commenced delivery of water to Tucson in 1989.

From its commencement, the Bureau has moved the Project along with exceptional efficiency. Last year it planned to begin in fiscal 1983 construction of the Picacho Pumping Station in Phase A of the Tucson Aqueduct. This year the Bureau advises that it is capable in fiscal 1984 of beginning work on three pumping plants along the Tucson Aqueduct (Brady, Picacho and Red Rock), of ordering pumps and motors for these plants and of additional right-of-way acquisition and construction on Reaches 1, 2 and 3 of Phase A.

The reduction of fiscal 1983 funding and technical problems caused deferral of the commencement of Tucson Aqueduct construction. We are advised that the funding reduction caused by the Continuing Resolution and the proposed fiscal 1984 appropriation will delay completion of the aqueduct by three years. The Bureau is now planning to construct in fiscal 1984 only the first 4.4 miles of the Tucson Aqueduct. No funds will be available to reinstate the pumping plant work which was deferred in 1983. The addition of at least $15 million to the fiscal 1984 appropriation designated specifically for work on Reaches 1, 2 and 3 of Phase A of the Tucson Aqueduct would enable the Bureau to put the Tucson Aqueduct back on schedule.

Mr. Chairman, the State of Arizona is unified in its support for completion of the main CAP Aqueduct, down to its terminus in Southern Arizona as the first priority for CAP funds. Governor Babbitt, the Central Arizona Water Conservation District, and the major water users in the State have all endorsed this position.

The Tucson Aqueduct will deliver needed municipal and industrial water to the large copper mines and the more than half a million people of the Greater Tucson area. These users will repay the capital costs of the Project at a rate estimated in the range of $50 per acre foot.

Each year that completion of the main aqueduct is delayed increases the cost of completion and delays the commencement of municipal and industrial capital repayment.

We respectfully urge this Committee to continue the practice of making appropriations commensurate with the Bureau's full work capability. We ask that at least $15 million be added to the fiscal 1984 CAP appropriation and that these funds be specifically designated for construction and excavation on three pumping plants along the Tucson Aqueduct Phase A (Brady, Picacho and Red Rock), for ordering pumps and motors for these plants and for additional right-of-way acquisition and construction on Reaches 1, 2 and 3 of Phase A in fiscal 1984.

In the event that a Continuing Resolution is adopted again this year, we ask that language be included in the Resolution which would direct the Bureau of Reclamation to commence construction and equipment purchases in Reaches 1, 2 and 3 of Phase A of the Tucson Aqueduct during fiscal 1984.

STATEMENT OF R. B. "BUCK" O'RIELLY, PRESIDENT, SOUTHERN ARIZONA WATER RESOURCES ASSOCIATION

Mr. RILEY. Mr. Chairman, in addition to Mary Beth Carlisle, I have two other people who are members of our executive committee of the Soutern Arizona Resources Association that have come to Washington with me today to present this testimony, Mr. Tom Chandler and Mr. Bill Estes, who are in the back of the room.

I also have with me over 100 letters from citizens of all segments of our community that speak to the important need to complete the CAP in Tucson by the year 1990.

We are delighted to have this opportunity to bring our views to this committee. Our members are farmers, businessmen, ordinary residential water customers of Pima County and Santa Cruz County. We have existed over 100 years on solely ground water pumped from wells. Because of the intensive growth in the Sun Belt, our needs have rapidly outstripped our supply. Tucson is the third fastest growing city in America and will stay that way.

As Governor Babbitt said, Tucson is the largest city in the planet entirely dependent on pumped ground water. The residents of the area spend over $20 million a year on electricity to pump ground water. This will increase each year because the deficit of the water table is increasing, and by the time CAP comes to our area we will have spent over $200 million to pump ground water.

The increasing water costs, declining water tables, and the new law that mandates overdrafting cease by the year 2025, all demand that we appear before you today to emphasize the importance of your role in assuring the CAP is dealt with in an expeditious manner. The Governor and members of the Arizona congressional delegations are all united that completion of the CAP Aqueduct to its terminus by 1990 is the State's top water priority. No single factor is as important to this objective as adequate congressional appropriations for each of the next 7 fiscal years.

Before, the Bureau of Reclamation money has been made to them on time, under budget, and construction of the CAP has been a model of public efficiency. Yet the scheduled date has slipped 3 years from 1989 to 1992, in just the last year.

We urge you in the strongest fashion possible to appropriate the funds necessary to keep all segments of the CAP on schedule.

In 1951, Congress told Arizona to settle its water claim to the Colorado River in the Supreme Court. In 1963, we won a lawsuit in the Supreme Court. In 1968, you authorized building of the CAP, and yet 15 years later we in southern Arizona are still 8 years away from seeing the first drop of CAP water. We can't afford the delay. The sooner it is built, the sooner we can begin to repay the United States for its loan.

Completing the CAP will put money back in the Treasury because construction costs are repaid only when the project is fully completed. Tucson plays a large role in capital recovery, because it will be taking almost 30 percent of the total water to be delivered through the CAP. Municipal water carries the greatest repayment rate.

Mr. Chairman, there are over 575,000 people where we come from and 10 private water companies, 2 cities, 4 copper mines that mine over 20 percent of the U.S. copper production, irrigation districts, and Indian tribes. Recently, the Pagao Settlement Act was passed which had community participation and up-front dollars to show further cooperation in spirit from our water basin. The Federal Government will face high costs beginning in 1992 which would result from penalties if the Papago Indian Water Settlement is not satisfied.

We are making a concerted effort to manage our water resources. We have the lowest per capita use of all the large western cities—160 gallons per person per day. Our conservation is a 20-percent reduction in this figure. Our Pima County farmers have the highest efficiency rate in the State and have instituted many new practices. Our mining companies have extensive water reuse programs. Additionally, effluents will be used to replace some ground water use. But with all this, our overdrafting is still twice the renewable ground water supply without CAP. The consequences to our aquifer are devastating.

The schedule brings CAP water to Phoenix in 1985, Pinal County in 1987, and to Tucson for 1989. Through the continuing resolution in December, the Tucson phase A has slipped. In the spirit of fairness, we are here to try to get the aqueduct back on schedule.

The Bureau of Reclamation says they can use $15 million in the Tucson portion of the aqueduct in fiscal year 1984. This $15 million, in addition to the administration's request of $165 million, will put us back on track for a 1990 completion. It will make up for the slippage that occurred in December. We ask this money be earmarked to begin construction on, and purchase pumps and motors for, the three pumping plants of the Tucson Aqueduct, and for construction and acquisition of rights-of-way on reaches 1, 2, and 3. Pumping plants, pumps, and motors take many years to complete.

Mr. Chairman, the Bureau of Reclamation has demonstrated the ability to build this in a truly expeditious manner, given sufficient resources. We appreciate your consideration and look forward to your help in obtaining funding. We trust the funding will continue to the Tucson portion of phase A even if a continuing resolution for the fiscal year 1984 is required.

Thank you.

Chairman HATFIELD. Thank you very much.

How much of the Tucson leg is municipal-industrial water and how much is for agriculture use?

Mayor MURPHY. The majority is earmarked at the current rate of about 180,000 acres annually for municipal-industrial. There is a significant requirement, however, on the part of the agricultural water-using interests, specifically including the Indian water-using interests which are tied specifically to the availability of agricultural Central Arizona Project.

Chairman HATFIELD. Can you provide that in percentages?

Mayor MURPHY. I can't off the top of my head.

Chairman HATFIELD. But there is a significant amount for agriculture. Cotton is water intensive?

Mayor MURPHY. Yes, sir, we can provide the exact breakout for the record.

[The information follows:]

BREAKDOWN OF WATER ALLOCATIONS

Your questions concerning the proportional relationship between municipal and agricultural CAP allocations in Tucson is complicated by the fact that allocations vary greatly over time. My answer, therefore, may be a bit more detailed than I would like or you would expect. CAP allocations in acre-feet by decade and by major user are as follows:

[In acre-feet]

	Municipal	Agriculture	Indian
1990	72,000	69,000	38,000
2000	92,000	55,000	38,000
2010	120,000	43,000	38,000
2020	155,000	33,000	38,000
2025	173,000	28,000	38,000

In 2025, municipal is 73 percent of the total and 86 percent of the total of only municipal and agriculture. In 1990, the comparable proportions are 43 percent and 51 percent.

Chairman HATFIELD. Mayor, I suppose in anticipation of this hearing, at the request of your Senators, we did include in the emergency jobs bill we passed just before midnight, and which the House will have to act upon an amendment, we added language which reads:

> Within funds made available for fiscal year 1983, the conferees direct the Secretary of the Interior to proceed with construction of the Tucson Aqueduct beyond the first 4 miles that reached phase A.

Mayor MURPHY. We were aware of that, Mr. Chairman, and, again, most apppreciative for it.

One of the concerns we have is the specific reference to funds available for 1983. What we are basically talking about here is the budget year of 1984, and wanting to insure that that kind of philosophy is carried into the 1984 budget with sufficient funding to accommodate what that language directs with respect to the 1983 funds.

Chairman HATFIELD. You are aware that we have had experiences where we have had both language and funding which has not been implemented. So sometimes getting the language is as important as getting the dollars.

Mayor MURPHY. We worry about that too.

Senator DeConcini. Mr. Chairman, I want to, for the record, thank the chairman of this committee, and he is also full chairman of the full Appropriations Committee, for his assistance in the language and the addition of $15 million in the jobs bill to the Bureau of Reclamation. We have $138 million in that bill now, and with this language, I am hopeful what is not used in 1983 will be carried over.

Also for the record, Mr. Chairman, I would like to point out the delays that have come to the Tucson Aqueduct is roughly 2 years as pointed out by Mr. O'Rielly, and in the testimony given on March 16 before this committee, Commissioner Broadbent answered a question as to the reason for the delay, and I would like to read that into the record so you can understand. He said:

> The 2-year delay is an accumulated impact caused by the combined effort of the $38 million cut as well as the $5 million cut.

Now the $38 million cut came in the 1982 budget when we had the original request of $191.5 million, and ended up passing only $152.7 million, which was the administration's adjusted request, so we lost all that back in 1982.

Then in 1983 the administration put in a very generous budget, I believe, $159.2 million, after taking off their underfinancing charge of some $16 million that left us $143 million, and then the continuing resolution knocked off another $5 million off that. Now that is the problem we are facing.

Mr. Chairman, this is why the cooperation you gave us, as the full Senate did on the floor, of the jobs bill might play a very important part, and we thank you sincerely for that.

I have no questions or further statements to make.

Chairman HATFIELD. I would like to just say for the record there has been within the last 15 years considerable activity on this project, Mr. O'Rielly, so it has not been inactive. I realize the concern you have for the Tucson area, but in the overall Central Arizona Project I think we have done and made some remarkable investments from the Federal Treasury to fund one-third of this project which is estimated to cost about $3.0 billion. If you want to measure that against some other projects, it has moved rather rapidly. Maybe not rapidly enough as some would like.

PREPARED STATEMENTS

Thank you very much. We will have the staff review the additional statements you have submitted for duplication and include those statements in the record.

Mayor MURPHY. We appreciate this opportunity, Mr. Chairman.

[The statements follow:]

STATEMENT OF TIMOTHY CREEDON, SENIOR VICE PRESIDENT, VALLEY NATIONAL BANK OF ARIZONA

It is my understanding that the Senate Appropriations Committee is scheduled for a hearing on the Central Arizona Project on or about March 23, 1983.

Tucson, a metropolitan area of some 577,000 persons, has been growing in population at an average annual rate of about 4 percent for the past two decades. In 1982, despite the downturn in the Nation's economic conditions, our city showed a gain of 15,000 persons.

When considering appropriations for the Central Arizona Project, the committee must keep in mind that Tucson has no source of surface water. All of our water comes from underground sources. The water tables have been dropping steadily to meet the needs of this city despite our continuing conservation measures.

Tucson, in the Southwest Sun Belt, continues to be one of the fastest growing cities in the Nation and must develop new sources of water to meet the needs of the future. Water for Tucson is vital to the economic well-being of our city.

The leadtime required for the manufacture of pumps and motors, acquisition of the rights-of-way, and construction of the aqueduct by 1990 is critical to the economy of the Tucson urban area, because Tucson serves as the regional trade center for all of southern Arizona's population of almost 900,000 persons. In addition, Tucson is an important commercial trade area and medical center for northern Mexico.

I urge the committee to appropriate an additional $15 million to the planned $165 million in order to place the completion of the Tucson Aqueduct back on schedule.

STATEMENT OF LARRY A. BROWN, PRESIDENT, TUCSON METROPOLITAN CHAMBER OF COMMERCE

The Tucson Metropolitan Chamber of Commerce wholeheartedly supports the completion of the Central Arizona Project.

If southern Arizona is to continue to prosper, an adequate, reliable water source for the years ahead is a must. There is no better way to guarantee a bright future for southern Arizona than to urge the completion on the CAP at the earliest possible date.

STATEMENT OF KARL G. RONSTADT, TUCSON, ARIZ.

This statement is to urge the Appropriations Committee to appropriate an additional $15 million over and above the $165 million budgeted by the President for the Central Arizona Project. If southern Arizona is to maintain its life style and economic base at present levels, it is essential CAP water be delivered to the Tucson area by 1990. In order to maintain this schedule, construction of reach 1, phase A, of the Tucson Aqueduct must be commenced in fiscal year 1984. Additionally, acquisition of the rights-of-way for phase B must be accomplished this coming year.

The Central Arizona Project and its timely completion to Tucson is essential to maintain the more than one-half million people who currently depend on diminishing ground water. I urge your favorable consideration of this request and thank you for your continued interest.

STATEMENT OF LINDA A. DRAKE, TUCSON, ARIZ.

I would like to impress upon the Senate Appropriations Committee the following regarding the Central Arizona Project:

1. The Central Arizona Project, bringing Colorado River basin water into central Arizona, is not a partisan issue. It is a vital fluid transfusion to all of central Arizona, especially to Tucson, with more than one-half million people currently depending upon ground water. It is the key to Tucson's future.

2. That, without fail, the Central Arizona Project must be completed by 1990, as originally scheduled, to the south boundary of the Papago Indian Reservation.

Therefore, I urge the Senate and House Appropriations Committees to appropriate an additional $15 million over and above the $165 million budgeted by the President to specifically be spent for the construction of reach 1, phase A, of the Tucson Aqueduct, to include pumping plants—that is, motors and pumps for the Picacho, Brady, and Red Rock pump stations—and, additionally, for the acquisition of rights-of-way for phase B. If this is done in fiscal year 1984, this level of funding should enable the project to get back on schedule.

Thank you very much for your consideration.

STATEMENT OF ROBERT C. GEHLBACH, GREEN VALLEY (ARIZ.) COORDINATING COUNCIL

I would like to impress upon the Senate Appropriations Committee the following regarding the Central Arizona Project:

The Central Arizona Project is not a partisan issue. It is a vital fluid transfusion with more than one-half million people currently depending upon ground water. It is the key to Tucson's future.

The Central Arizona Project must be completed by 1990 without fail, as originally scheduled, to the south boundary of the Papago.

Therefore, I urge the Senate and House Appropriations Committees to appropriate an additional $15 million over and above the $165 million budgeted by the President to specifically be spent for the construction of reach 1, phase A, of the Tucson Aqueduct, to include pumping plants—that is, motors and pumps for the Picacho, Brady, and Red Rock pump stations—and, additionally, for the acquisition of rights-of-way for phase B.

If this is done in fiscal year 1984, this level of funding should enable the project to get back on schedule.

Thank you for your consideration.

STATEMENT OF ELAINE HOLUB, ON BEHALF OF THE SOUTHERN ARIZONA WATER RESOURCES ASSOCIATION

I am writing in support of the efforts of the Southern Arizona Water Resources Association delegation to urge you to continue funding for the Central Arizona Project. As a native of Tucson, I am concerned that the CAP will be delayed and hamper the growth and prosperity in this region.

Please continue to fund the CAP on schedule. Southern Arizona needs the water to thrive.

Thank you.

STATEMENT OF HARLAN E. CAIN, PRESIDENT, DESERT MEADOWS III HOMEOWNERS ASSOCIATION, ARIZONA

As president of Desert Meadows III Homeowners Association (a subdivision of Green Valley) and as vice president of the Green Valley Coordinating Council, I would like to impress upon the Senate Appropriations Committee the following regarding the Central Arizona Project.

1. The Central Arizona Project, bringing Colorado River basin water into central Arizona, is not a partisan issue. It is a vital fluid transfusion to all of central Arizona, especially to Tucson and the area immediately south of the city, with more than one-half million people currently depending upon ground water. It is the key to our future.

2. That, without fail, the Central Arizona Project must be completed by 1990, as originally scheduled, to the south boundary of the Papago Indian Reservation.

Therefore, I urge the Senate and House Appropriations Committees to appropriate an additional $15 million over and above the $165 million budgeted by the President to specifically be spent for the construction of reach 1, phase A, of the Tucson Aqueduct, to include pumping plants—that is, motors and pumps for the Picacho, Brady, and Red Rock pump stations—and, additionally, for the acquisition of rights-of-way for phase B. If this is done in fiscal year 1984, this level of funding should enable the project to get back on schedule.

Thank you very much for your consideration.

STATEMENT OF HARRY S. MOSEBROOK, GREEN VALLEY, ARIZ.

I am writing as a concerned citizen residing in southern Arizona, with the intention that it be hand-carried to Washington, D.C., by a delegation representing the Southern Arizona Water Resource Association, with the request that it be made a part of the record of the Senate Appropriations Committee hearings on the Central Arizona Project.

Completion of the southern extension of CAP to the south boundary of the Papago Indian Reservation south of Tucson by the year 1990 is crucial to the water users of the Santa Cruz Valley. The population of this valley is expected to grow enormously, so that water from CAP will become critical by that time.

I urge the Senate Appropriations Committee to appropriate an additional $15 million over and above the $165 million budgeted by the President. If this is available in fiscal year 1984, this level of funding will be sufficient to get the project back on schedule so the 1990 date for completion can be met.

STATEMENT OF R. KEITH WALDEN, SAHUARITA, ARIZ.

I am a longtime resident of the Tucson area and a businessman engaged in agriculture. Water is not only vital to my business, it is essential to my continued life style in the southern Arizona area.

I would like to impress upon the Senate Appropriations Committee the following regarding the Central Arizona Project:

1. The Central Arizona Project, bringing Colorado River basin water into central Arizona, is not a partisan issue. It is a vital fluid transfusion to all of central Arizona, especially to Tucson, with more than one-half million people currently depending upon ground water. It is the key to Tucson's future.

2. That, without fail, the Central Arizona Project must be completed by 1990, as originally scheduled, to the south boundary of the Papago Indian Reservation.

Therefore, I urge the Senate Appropriations Committee to appropriate an additional $15 million over and above the $165 million budgeted by the President to specifically be spent for the construction of reach 1, phase A, of the Tucson Aqueduct, to include pumping plants—that is, motors and pumps for the Picacho, Brady, and Red Rock pump stations—and, additionally, for the acquisition of rights-of-way for phase B. If this is done in fiscal year 1984, this level of funding should enable the project to get back on schedule.

Thank you very much for your consideration.

STATEMENT OF JOSEPH R. DIXON, CHAIRMAN, WATER RESOURCES COORDINATION COMMITTEE, ARIZONA

On behalf of the Water Resources Coordination Committee of eastern Pima County, I am writing in support of an additional appropriation of $15 million in fiscal year 1984 for construction of phase A of the Central Arizona Project's Tucson Aqueduct.

WRCC support for the increased funding reflects a firm consensus among major water-user interests that the schedule and funding for completion of the Central Arizona Project to the south boundary of the Papago Indian Reservation is vital to the Tucson area.

The WRCC was formed in 1977 as the primary forum for municipal, industrial, agricultural, mining, and Indian water user interests. Since then, the group has met regularly to come up with an equitable water resources solution that meets present and future water needs. Completion of the Tucson Aqueduct by 1990 is a key objective of the committee.

Thank you for your consideration.

For your information, I am attaching a list of WRCC members:

Anamax Mining Co., ASARCO, Inc., Avra Valley Irrigation District, Bureau of Indian Affairs, Cortaro-Marana Irrigation District, Davis-Monthan Air Force Base, Duval Corp., Farmers Investment Co., Papago Tribe, Papago allottees, Pima County Wastewater, private citizen, Tucson active management area of the Arizona Department of Water Resources, Tucson Electric Power Co., Tucson Water, U.S. Army Corps of Engineers, and University of Arizona.

STATEMENT OF SARAH BROWN, TUCSON, ARIZ.

Tucson has grown so much since I was born and looks as though it will continue to do so faster in the future. Some of the changes have been depressing, because development investments were not made in time. Please help us to make changes for the better while it is the time to do so.

CAP needs to be at the Papago Reservation by 1990. We need $15 million in 1984 for pumping plants.

This is not a partisan issue. Please don't let Tucson down; we need CAP.

STATEMENT OF R. BARRY PALMER, EXECUTIVE DIRECTOR, ASSOCIATION FOR THE DEVELOPMENT OF INTERSTATE NAVIGABILITY ON THE ALLEGHENY, MONONGAHELA, AND OHIO (DINAMO)

ACCOMPANIED BY:
MILES DEAN, VICE CHAIRMAN, DINAMO
LESTER SUTTON, VICE CHAIRMAN, DINAMO.

Chairman HATFIELD. Our next witness is Mr. Barry Palmer, executive director of DINAMO, who will testify on Ohio River and Monongahela River inland waterways systems and improvements.

Mr. PALMER. Good morning, Mr. Chairman.

On my left is Mr. Miles Dean, from Charleston, W. Va., and on my right, the president of DRAVO Mechling, Mr. Lester Sutton. We will keep our remarks very brief.

I am executive director of DINAMO, the Association for the Development of Interstate Navigability on the Allegheny, Monongahela and Ohio. Our initial mission has been replacement of locks and dams that are deteriorated and inadequate lock and dam structures on the rivers of the upper Ohio Valley. On the eve of the merger of DINAMO and the Ohio Valley Improvement Association, we have extended the scope of our mission to the entire Ohio River system.

CRITICAL LOCK AND DAM REPLACEMENTS

For both the associations, the replacement of the Gallipolis locks and rehabilitation of the dam are the highest priority. Additionally, both associations have long supported the replacement of the deteriorated facilities of locks and dam 7 and 8 on the Monongahela River. In all other respects, our concerns for the upper Ohio Valley waterways are the same. Our testimony today will settle on the urgency of initiation of construction of the Gallipolis and Monongahela River projects initial construction funds for those projects subject, of course to authorization.

We emphasize also the need for adequate funding of feasibility studies for replacements of the Elmsworth, Dashields, and Montgomery Island locks and dams on the upper Ohio River and replacement of the Winfield lock and dam on the Kanawha River in West Virginia.

Our witnesses today are Mr. Lester Sutton, president of DRAVO Mechling Barge Line in Pittsburgh, Pa., and a vice chairman of DINAMO and a member of the executive committee and board of directors of DINAMO; and Mr. Miles Dean, director, West Virginia Governor's Office of Economic and Community Development, who is also a vice chairman of DINAMO and a member of the executive committee and board of directors.

DINAMO is a collection of business, labor, and State government leaders from Pennsylvania, Ohio, West Virginia, and Kentucky.

Mr. Sutton will go first.

Mr. SUTTON. Thank you.

GALLIPOLIS LOCK AND DAM

The economic viability of the Ohio River Valley has been a popular subject lately. The March 21 Newsweek cover story talks of the collapse of industrial America. I would choose a different description like rusting away, deteriorating, obsolete, outmoded, and inadequate.

Certainly, the first priority and the most pressing need is the replacement of the Gallipolis locks located 279 miles downstream of Pittsburgh, which is the largest inland port on the inland waterway system. Halfway between Pittsubrgh and Louisville, it epitomizes our deteriorating infrastructure. It represents a severe chokepoint between the Pittsburgh steel mills, much of their coal supply, and much of their market, shaving a few cents per ton off their ability to compete with imports. Products from 19 different States move through Gallipolis.

The Gallipolis locks and dam provide the gateway between the upper Ohio basin on one hand and the entire Middle West and gulf coast on the other. This facility is the most severe bottleneck to navigation on the Ohio River between Pittsburgh and the Mississippi. The main lock is only 600 feet long, the auxiliary lock only 360 feet. Between the Pennsylvania border and the Mississippi there are 17 other lock and dam installations, all but one equipped with a 1,200-foot main lock and a 600-foot auxiliary.

The newly completed Smithland locks on the lower river is equipped with two 1,200-foot locks. Thus, the Gallipolis structure is the only one in this 940-mile distance not equipped with a modern lock 1,200 feet long. Furthermore, the 45-year old locks and dam are badly deteriorated and are so located on a bend in the river as to constitute a serious hazard to navigation. This facility stands like a two-lane bridge in a six-lane highway.

TRAFFIC AND COMMERCE PROJECTIONS

Traffic has been expanding at Gallipolis for many years and congestion is becoming very commonplace. By 1990, the earliest date at which it is reasonable to expect replacement locks to be operative, traffic is projected by independent studies prepared for the Corps of Engineers to reach a range of 64.5 to 71 million tons, when average delay time in waiting access to locks is expected to reach 32 hours per tow transit. This average obscures the fact that delays of 100 hours are not uncommon. It is responsibly estimated that the cost of such delays will reach approximately $129 million in 1983 dollars. Deteriorating requires the closing of the main lock for extended periods of repair.

The Corps of Engineers estimates that by 1990 about 15 million tons of traffic will be driven from the river as a result of Gallipolis congestion. This economic burden would, of course, be a reflection of chaotic traffic conditions, particularly as the aging and deterioaring locks require more and more downtime for repairs. Congestion would, at times, reach crisis proportions, shipping schedules would be severely disrupted, threatening orderly production of electric power, steel, petroleum, and chemical products and other essentials to the grave impairment of the basin economy. Severe repercussions would extend beyond the base to areas supplied with electric power, steel, and other products from basin sources, or providing raw materials or finished products for the basin industries and consumers.

IMPACT OF TRAFFIC CONGESTION

Some conception of the extent and severity of traffic conditions by 1990 may be obtained from the recent experience at Gallipolis during the shutdown of the main lock. According to industry sources, on December 1, 1980, 17 upbound tows and 13 downbound tows were awaiting access to the available 300-foot lock, through which modern commercial tows had to be locked in five or six sections requiring many hours. The average delay time waiting acess on that date, in addition to time consumed in multiple lockages, was 4 days, 20 hours, and 20 minutes per tow. The waiting tows were strung out for 4 to 5 miles. Such shutdowns for maintenance and repair will, of course, become more frequent as deteriorating of these obsolete facilities continues.

The upper Ohio River basin is a mature industrial economy. Over generations of time, the structure of the processing of energy industries of this region evolved on a base of water transportation. Extensive installations are sited and laid out exclusively for receipt and shipment by water and no feasible alternative routings is available. The adverse impact of congestion at Gallipolis on the region and the Nation's objectives as to productivity, employment, and energy are very substantial.

REGIONAL AND NATIONAL BENEFIT

With adequate capacity in conformity with the dimensions and capacity of Ohio River projects extending for hundreds of miles above and below the Gallipolis site, the modernized Gallipolis facilities can make a major contribution to both the regional and national economy and to the advancement of national interests in increased employment opportunities, productivity, in restraint of inflation, and to strengthening the balance of payments.

The electric power industry in the upper Ohio Valley provides the significant support to national energy security and the U.S. balance of payments. This industry is a large volume consumer of coal, principally waterborne. Its megawatt capacity provides electric power through an extensive marketing area extending to southern Michigan, northern Ohio, western New York State, and other northeastern points. Increasing obstruction of coal receipts via Gallipolis will impair the growth potential of this power base and substantially increase its costs.

The reliance of the steel industry of the Pittsburgh and upper Ohio Valley districts on these locks is also a critical factor in the productivity of the industry and the welfare of its employees and of the U.S. balance of payments. The industry's costs are directly affected by its dependence on large tonnages of low-volatile metallurigical coal upbound via Gallipolis. In addition, these districts ship millions of tons of finished steel via the Ohio River to the Lower Mississippi Valley and gulf coast markets in direct competition with growing volumes of Japanese, Korean, Brazilian, and Common Market steel. The finished steel transits at Gallipolis in a recent year represented an industry revenue of $472 million and provided thousands of jobs in the region.

I have attached to my prepared statement copies of material prepared by Professor Marvin Barloon from Case Western University as to the critical importance of early modernization of the upper Ohio River navigation system for the coal, steel, and chemical industries of the upper Ohio River basin. Let there be no doubt that the early authorization of construction and funding of the Gallipolis project and the Gray's Landing and Point Marion projects on the Monongahela River are of critical importance to this region.

LOCKS AND DAM 7 AND 8

I would like to take this opportunity to bring to the attention of the committee the importance of prompt replacement of locks and dam 7 and 8 on the Monongahela River which is our second priority. These projects have been in operation since 1925. Over the years, they have been allowed to deteriorate without a comprehensive program for modernization. The area served by this waterway system has low- and medium-sulfur coal reserves with a life of 75 years. As the Nation moves toward energy independence, these reserves will grow in importance.

Replacement of locks 7 and 8 will allow the continued economic growth of the region. Modern facilities of adequate size to accommodate future traffic growth would permit expansion of markets for the region's important coal reserves and would stimulate capital investment and related economic activity. Employment would, of course, increase, and the region which now suffers from such standard income levels would be enabled to move forward to full participation in national income standards.

It is an immediate necessity that these average and badly deteriorated facilities be replaced in order to avert the danger of collapse. Such an event would not only block navigation for an extended period, it would also gravely impair vital water supply now maintained by these weakened structures for communities, electric utilities, and industries in the region. The national economic development benefits of replacement of these locks clearly justify the expenditure required for their construction.

In its wider aspect, the replacement is to insure the security of coal supplies for the upper Ohio Valley steel industry. Replacement with modern facilities would reduce the industry's fuel costs and would greatly strengthen its competitive position, assisting materially in the industry's ability to expand employment opportunities.

WINFIELD LOCK AND DAM

We also recommend $700,000 to complete the study for the replacement of the Winfield lock on the Kanawha River. This lock restricts coal traffic as well as shipments to and from the chemical complex in the Charleston,W. Va., area. Coal, both steam and metallurgical, from this area is vigorously competing in the world coal market. Most Kanawha River tipples are mine-to-river tipples; therefore, are more competitive than those mines that depend on the railroads to get to the river.

OHIO RIVER MAIN STEM STUDY

Funding for the Ohio River main stem study has been cut back. We recommend that $500,000 be added to this study to complete the evaluation of Emsworth, Dashields, and Montgomery locks on the upper Ohio which stand at the gateway to the Pittsburgh industrial complex and, like Gallipolis, have only 600-foot chambers. These three locks and dams already average 54 years old. It now takes an average of 24 years from demonstration of need to completion of a lock and dam project. I was told last year that the cutback in study funds for the Ohio main stem study would add 3 years to the replacement time of these facilities. If that is correct and we are really looking at 27 years for replacement, these locks would be 81 years old.

Gentlemen, the Ohio Valley doesn't need those kind of handicaps.

I know you are all conscious of budget deficits and constraints. You may have also noticed that the fiscal year 1984 requested amounts for continued improvement of the Ohio River system are pittances. But, they are critical. They must be appropriated so that the 24-year period to replace a facility doesn't become 25.

IMPORTANCE OF INFRASTRUCTURE IMPROVEMENTS TO INCREASE PRODUCTIVITY

One other factor is important in relation to budget deficits. These expenditures for replacement of our infrastructure will improve our productivity. They will improve our ability to compete. One of the reasons that we have budget deficits and difficulty competing is that a decreasing percentage of Government-controlled funds and Government's control of 46 percent of total GNP; one of the reasons for the deficits is that more and more of the Government-controlled funds have been consumption-type expenditures and less and less has been spent on productivity-improving investments.

Don't be taken in by those who say high tech is our answer. That's like saying, "We can't compete with the Japanese in steel and autos, but we're going to whip them good in calculators and computers."

That Newsweek article counted the people cost of the collapse of industrial America. The headline read in part, "Now their factories are closed, their jobs gone. and their dreams are shattered—perhaps forever."

Gentlemen, it doesn't have to be that way. America and the Ohio Valley can compete. We, both business and government, simply need to look back at how we built the most powerful industrial machine ever and start repairing it. These small outlays to keep the Ohio Valley's artery flowing efficiently are a step in that direction.

Therefore, it is my sincere hope that this committee will recommend funds in the amounts requested for these projects and for the continuing studies which we hope will result in early authorization of replacement of other urgently needed navigation improvements in this region.

We urge you to include these items. We are most grateful to the committee for this opportunity to be heard on these vital issues. Thank you very much.

Chairman HATFIELD. Thank you.

GALLIPOLIS LOCK AND DAM

Mr. DEAN. I am Miles Dean, director of the West Virginia Governor's Office of Economic Development. I am also vice chairman of the executive committee of DINAMO.

I am here to speak for Gallipolis in the Ohio River system. In West Virginia, as well as in much of the middle Ohio Valley, we currently face an economic crisis of unprecedented dimensions. Our steel businesses are all feeling the effect of the economic recession in our country. In West Virginia, we have unemployment that by Federal standards measures in excess of 20 percent of our work force. In 11 of 55 counties in our State, unemployment exceeds 30 percent. There are economists who say these workers will never return to work; they will be lost in the transition from one economic era to another.

I disagree, but know we will have to cope with unemployment and build our way out of this situation.

I am not here to discuss the immediate economic problems of West Virginia or Ohio or Pennsylvania, or for that matter any of the States in the Midwest, but instead to talk about a problem that is both a cause and a symptom of the economic conditions which exist. That problem is, after 20 years of study, our failure to begin the capital rebuilding of Gallipolis. A problem that not only affects West Virginia, but the 19 other States that ship through the locks.

Mr. Chairman and members of the subcommittee, I am sure you are aware it is over 20 years since the Office of the Chief of Engineers authorized the replacement study of the locks and dams there. I am sure you are aware we are celebrating the 17th anniversary of the submission of that report to the division to which it reports.

I am sure you are aware that it has been 14 years since the districts submitted a report which recommended a new 110-by-1,200-foot lock chamber and new dam. I am sure you are aware of the report there for rivers and harbors is now nearly 13 years old. I am sure you are aware we are 1 year from the 10th anniversary of the district's revised report. I am sure that you are aware that 9 years ago, the Secretary of the Army indicated that he needed a systems analysis there, and that over 7 years ago the systems analysis was submitted.

I am sure you are aware that the phase 1 design memorandum for single 1,200-foot lock replacement of Gallipolis is over 6 years old and that the phase 1 report is over 2 years old, as is the final environmental impact statement.

I am sure you are aware on September 9, 1981, the Board of Engineers for Rivers and Harbors agreed on the recommendation of the general design memorandum and, chairman and members of the subcommittee, I am sure you are aware that now, over 20 years later, the locks and dams have not been revised, renewed, or replaced. Over 20 years and still being studied. The locks and dams were constructed in 1937 and now, 46 years later, Gallipolis is the only Ohio River project from the Pennsylvania State line to the mouth of the river without a 1,200-foot locks chamber.

Gallipolis passes more traffic tonnage and barges than any traffic upstream of Louisville there, and yet its locking chambers are only 600 feet long.

In 1976, Gallipolis traffic was 41.8 million tons; in 1981 it was only 40.3 million tons. Part of the decline is the economy, but part is the inability of shippers to put up with the ever-increasing dangers in moving through there. Not surprisingly, West Virginia, Kentucky, Ohio, and Pennsylvania are major shippers, but the fact is not understood that Louisiana, Indiana, Alabama, Iowa, Minnesota, Missouri, Mississippi, Oklahoma, Tennessee, and Nebraska all ship and receive through the Gallipolis locks.

Mr. Chairman and members of the subcommittee, the problem is both a West Virginia problem and a national problem. Twenty years is too long to study a problem with no resolution. Twenty years is too long to restrain the thought of economic development in the Ohio Valley. I urge your support of the appropriation of $6.4 million scheduled for the construction of the Gallipolis project in 1984. The construction and replacement of locks requires movement, not study.

Thank you for your attention.

Chairman HATFIELD. Gentlemen, it is like the preacher on Sunday, you are preaching to the wrong committee. This project is not authorized for construction. This is not the authorizing committee, and it has been more than 10 years since the authorizing committee took action on projects of this kind. Your speech is very eloquent, but it is directed to the wrong place. I can totally empathize with your problem, the Bonneville lock on the Columbia River is in the same situation. I am reaching the point that if the authorizing committee continues to fail to act on these projects that are so desperately needed, then perhaps the Appropriations Committee will have to do something.

I want to underscore again that we have maintained the viability of this project in this committee by appropriating money for continuation of engineering and design. We will probably continue to do so because of strong support for this project. But I would hope while you are here you will stop by and see some members of the authorizing committee, because they are the ones who failed to authorize the project and we can't appropriate money for something not authorized.

Thank you very much.

[The statements follow:]

STATEMENT OF LESTER E. SUTTON, PRESIDENT, DRAVO MECHLING -

Submitted By:

DINAMO
The Association for the Development of Interstate Navigability
on the Allegheny, Monongahela and Ohio

My name is Lester E. Sutton. I appear in my capacity as a Vice Chairman of DINAMO and as a member of the Executive Committee and Board of Directors to present DINAMO's recommendations for FY 1984 appropriations for Ohio River Valley Navigation Projects and Studies.

Replacement of the Gallipolis Locks and the rehabilitation of the Dam is a critical project of national urgency and our first priority. According to the schedule of outlays for this project, accompanying the Corps General Design Memorandum, incorporated in a 1981 report to the Board of Engineers for the Gallipolis Project, the sum of $6,400,000 was scheduled for construction in 1984. We recommend appropriations in this amount for FY 1984, subject to authorization for construction. For the convenience of the Committee, there is attached to my statement, which has been filed for the record, tables showing the Gallipolis funding schedule for the years 1984 through 1994, which includes amounts for rehabilitation of the dam. The total estimated cost is $313 million.

For the Gray's Landing and Point Marion projects to replace deteriorated facilities of Locks 7 and 8 on the Monongahela, we urge the appropriation of $1,450,000 to initiate the Engineering and Design work. This recommendation is also subject to authorization. The estimated costs of the two projects is $163,325,000.

A table is attached to my prepared statement showing the Pittsburgh District's schedule for the years 1984 through 1988 (Pre-construction and Planning) and for the years 1989 through 1993 (Construction).

For the Kanawha River in West Virginia, we recommend the amount proposed in the President's budget which is $700,000 to complete the navigation study directed primarily to the question of feasibility of replacement of the Winfield Lock and Dam.

Several years ago, General Heiberg, then Director of Civil Works for the Corps of Engineers, reported a capability of $3 million for a 4-year study of feasibility of replacement of the Emsworth, Dashields and Montgomery projects, which was authorized by House Public Works and Transportation Committee resolution adopted on March 11, 1982. Since FY 1982, only $465,000 has been made available for this study from funds provided for the Ohio River Main Stem Study. The Main Stem Study is budgeted at $1,345,000 for FY 1984. Of that amount, only $300,000 is earmarked for the Emsworth, Dashields and Montgomery study. It is essential that this study be expedited to enable the replacement of these over-age (Emsworth - 62, Dashields - 53 and Montgomery - 46), increasingly inadequate structures to begin as soon as possible. We, therefore, recommend that the budgeted amount in the Ohio River Main Stem Study be increased to $1,845,000 so that an additional $500,000 can be earmarked for the study of these three projects which are the gateway to the Pittsburgh industrial complex.

In support of our recommendations for FY 1984, the key fact is that the economic vitality of Pennsylvania, West Virginia, Ohio and Kentucky depends directly on an efficient waterway transportation system which interconnects our region with national and world markets. The continued economic viability of our economy for our region is already endangered by the deterioration, obsolescence and inadequacies of certain locks and dams in our Upper Ohio River Navigation System.

The economic viability of the Ohio River Valley has been a popular subject lately. The March 21 News Week cover story talks of the collapse of industrial America. I would choose a different description like rusting away, deteriorating, obsolete, outmoded and inadequate.

Certainly, the first priority and the most pressing need is the replacement of the Gallipolis Locks located 279 miles downstream of Pittsburgh, which is the largest inland port on the inland waterway system. Halfway between Pittsburgh and Louisville, it epitomizes our deteriorating infrastructure. It represents a severe chokepoint between the Pittsburgh steel mills, much of their coal supply and much of their market, shaving a few cents per ton off their ability to compete with imports. Products from nineteen (19) different states move through Gallipolis.

The Gallipolis Locks and Dam provide the gateway between the Upper Ohio Basin on one hand and the entire Middle West and Gulf Coast on the other. This facility is the most severe bottleneck to navigation on the Ohio River between Pittsburgh and the Mississippi. The main lock is only 600 feet long, the auxiliary lock only 360 feet. Between the Pennsylvania border and the Mississippi there are seventeen (17) other lock and dam installations, all but one equipped with a 1,200 foot main lock and a 600 foot auxiliary. The newly completed Smithland Locks on the Lower River is equipped with two 1,200 foot locks. Thus, the Gallipolis structure is the only one in this 940 mile distance not equipped with a modern lock 1,200 feet long. Furthermore, the 45-year old locks and dam are badly deteriorated and are so located on a bend in the river as to constitute a serious hazard to navigation. This facility stands like a two-lane bridge in a six-lane highway. Traffic has been expanding at Gallipolis for many years, and congestion is becoming very commonplace. By 1990, the earliest date at which it is reasonable to expect replacement locks to be operative, traffic is projected by independent studies prepared for the Corps of Engineers to reach a range of 64.5-71 million tons, when average delay time in waiting access to locks is expected to reach 32 hours per tow transit. This average obscures the fact that delays of 100 hours are not uncommon. It is responsibly estimated that the cost of such delays will reach approximately $129 million in 1983 dollars. Deterioration requires the closing of the main lock for extended periods for repairs.

The Corps of Engineers estimates that by 1990 about 15 million tons of traffic will be driven from the river as a result of Gallipolis congestion. This economic burden would, of course, be a reflection of chaotic traffic conditions particularly as the aging and deteriorating locks require more and more downtime for repairs. Congestion would, at times, reach crisis proportions, shipping schedules would be severely disrupted, threatening orderly production of electric power, steel, petroleum, and chemicals products and other essentials to the grave impairment of the Basin economy. Severe repercussions would extend beyond the base to areas supplied with electric power, steel and other products from Basin sources or providing raw materials or finished products for the Basin industries and consumers.

Some conception of the extent and severity of traffic conditions by 1990 may be obtained from the recent experience at Gallipolis during the shutdown of the main lock. According to industry sources, on December 1, 1980, 17 upbound tows and 13 downbound tows were awaiting access to the available 300 foot lock, through which modern commercial tows had to be locked in 5 or 6 sections requiring many hours. The average delay time waiting access on that date, in addition to time consumed in multiple lockages, was 4 days, 20 hours and 20 minutes per tow. The waiting tows were strung out for 4 to 5 miles. Such shutdowns for maintenance and repair will, of course, become more frequent as deterioration of these obsolete facilities continues.

The Upper Ohio River Basin is a mature industrial economy. Over generations of time, the structure of the processing of energy industries of this region evolved on a base of water transportation. Extensive installations are sited and laid out exclusively for receipt and shipment by water. And no feasible alternative routings is available. The adverse impact of congestion at Gallipolis on the region and the nation's objectives as to productivity, employment and energy are very substantial.

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I have attached to my prepared statement copies of material prepared by Professor Marvin Barloon from Case Western University as to the critical importance of early modernization of the Upper Ohio River Navigation System for the coal, steel and chemical industries of the Upper Ohio River Basin. Let there be no doubt that the early authorization of construction and funding of the Gallipolis project and the Gray's Landing and Point Marion projects on the Monongahela River are of critical importance to this region.

I would like to take this opportunity to bring to the attention of the Committee the importance of prompt replacement of Locks and Dam #7 and #8 on the Monongahela River, which are our second priority. These projects have been in operation since 1925. Over the years, they have been allowed to deteriorate without a comprehensive program for modernization. The area served by this waterway system have low and medium sulphur coal reserves with a life of 75 years. As the nation moves toward energy independence, these reserves will grow in importance. Replacement of Locks 7 and 8 will allow the continued economic growth of the region. Modern facilities of adequate size to accommodate future traffic growth would permit expansion of markets for the region's important coal reserves and would stimulate capital investment and related economic activity. Employment would, of course, increase, and the region which now suffers from such standard income levels would be enabled to move forward to full participation in national income standards.

It is an immediate necessity that these average and badly deteriorated facilities be replaced in order to avert the danger of collapse. Such an event would not only block navigation for an extended period, it would also gravely impair vital water supply now maintained by these weakened structures for communities, electric utilities and industries in the region. The National Economic Development Benefits of replacement of these locks clearly justify the expenditure required for their construction.

In its wider aspect, the replacement is to insure the security of coal supplies for the Upper Ohio Valley steel industry. Replacement with modern facilities would reduce the industry's fuel costs and would greatly strengthen its competitive position assisting materially in the industry's ability to expand employment opportunities.

We also recommend $700,000 to complete the study for the replacement of the Winfield Lock on the Kanawha River. This lock restricts coal traffic as well as shipments to and from the chemical complex in the Charleston, West Virginia area. Coal, both steam and met, from this area is vigorously competing in the world coal market. Most Kanawha River tipples are mine to river tipples, therefore, are more competitive than those mines that depend on the railroads to get to the river.

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I know you are all conscious of budget deficits and constraints. You may have also noticed that the FY 1984 requested amounts for continued improvement of the Ohio River System are pittances. But, they are critical. They must be appropriated so that the 24-year period to replace a facility doesn't become 25.

One other factor is important in relation to budget deficits. These expenditures for replacement of our infrastructure will improve our productivity. They will improve our ability to compete. One of the reasons that we have budget deficits and difficulty competing is that a decreasing percentage of government controlled funds and government's control 46% of total GNP; one of the reasons for the deficits is that more and more of the government controlled funds have been consumption-type expenditures and less and less has been spent on productivity improving investments.

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Therefore, it is my sincere hope that this Committee will recommend funds in the amounts requested for these projects and for the continuing studies which we hope will result in early authorization of replacement of other urgently needed navigation improvements in this region.

We are most grateful to the Committee for this opportunity to be heard on these vital issues.

ATTACHMENT (A)

LESTER E. SUTTON'S WRITTEN TESTIMONY IN SUPPORT OF FY 1984 APPROPRIATIONS FOR THE OHIO VALLEY NAVIGATION SYSTEM

SCHEDULE OF APPROPRIATIONS GALLIPOLIS LOCK REPLACEMENT AND DAM REHABILITATION*

1984	Advanced Engineering & Design	$6.4 million
1985		$5.9 million
1986		$10.0 million
1987		$37.5 million
1988		$84.3 million
1989		$85.0 million
1990		$27.0 million
1991		$17.0 million
1992		$15.0 million
1993		$14.0 million
1994		$10.9 million
TOTAL		$313.0 million

COMBINED FUNDING GRAYS LANDING AND POINT MARION**

	Pre-Construction	Construction
1984	$1,475,000	-----
1985	$1,150,000	-----
1986	$1,150,000	-----
1987	$2,200,000	-----
1988	$1,550,000	-----
1989	-----	$30,000,000
1990	-----	$52,500,000
1991	-----	$37,300,000
1992	-----	$20,000,000
1993	-----	$ 1,600,000

*SOURCE: U.S. Army Corps of Engineers, Huntington District, GENERAL DESIGN MEMORANDUM, PHASE II, Table 17, Page 59, November, 1982.

**From our previous coordination with the Corps of Engineers and our close association with these two projects, DINAMO estimates this schedule of appropriations in order to replace Locks and Dam #7 and Lock #8 on the Monongahela River, subject to Congressional authorization in 1983.

ATTACHMENT (B)

THE URGENCY OF MODERNIZATION OF THE INLAND NAVIGATION SYSTEM TO THE ECONOMY AND THE STEEL INDUSTRY OF THE UPPER OHIO RIVER BASIN

Prepared for:
DINAMO
411 Seventh Avenue, Suite 1102
Pittsburgh, Pennsylvania 15219

By:
Marvin J. Barloon
Carlton Professor of Economics (Em.)
Case Western Reserve University
Cleveland, Ohio 44106

November 14, 1981

This report offers some specifics as to the critical role of the navigable rivers of the Upper Ohio Basin in the outlook for future employment and prosperity in the region. The Upper Ohio Basin encompasses all of western Pennsylvania, centered on the Pittsburgh Metropolitan Area, in addition to eastern Ohio and most of West Virginia, including the city of Charleston and the Kanawha River Valley. Some eight to ten million people reside in the region, deriving their livelihood, directly and indirectly, from the region's commerce, industries, and resources, largely water-based.

Low-cost mass transportation on the four interconnected rivers of the area is fundamental to this livelihood. But, the antiquated navigation works, constructed in an earlier generation, are a drag on progress, and the vitality of the region's economy can be sustained only by timely action towards modernization.

Magnitude and Character of the Upper Ohio Basin Port Area

The Upper Ohio Basin is the leading terminal port area of the largest navigable inland waterway system in the world, the Ohio-Mississippi River System, connecting the area with such distant commercial centers as St. Louis, Chicago, Minneapolis, Kansas City, Tulsa, New Orleans, Houston, Mobile, and northern Florida, among many others. These connections supply the region with a massive inflow of essential waterborne materials and fuels and provide a low-cost outlet for high-valued products for distribution throughout the continental interior and the Gulf Coast.

Most such port areas are concentrated on a single city, such as St. Louis and Chicago. But, that of the Upper Ohio Basin reaches into all sectors of the region. The Allegheny, Monongahela, and Kanawha Rivers combine with the main stream of the Ohio southward to the locks at Gallipolis to interlace the area with 570.5 miles of navigable channels with a minimum depth of nine feet navigable 12 months of the year.[1] Not only does the river system connect the area with distant centers. In addition, the network generates a large-volume movement of commodities and fuels internal to the region and essential to the vitality of the regional economy.

In 1978 (the latest year reported) the river system carried 39.8 million tons of cargo between the Upper Ohio Basin and downstream Ohio and Mississippi Basin and Gulf Coast points. In addition, the system moved 32.9 million tons within the region, for a total tonnage of 72.7 million.[2] This amounts to about 60 tons for every nonagricultural job in the area.[3]

Comparison with Major Seaports

The Upper Ohio Basin port area surpasses a number of large seaports in tonnage moved, such as Baltimore with 46.8 million tons in 1978, or Hampton Roads with 41.0 million, and compares well with the entire Delaware River from Trenton and Philadelphia to the sea, with 132.4 million tons.[4]

But, this comparison is not complete. Most of the freight moving through the deep-water ports is carried by rail and truck between the ports and communities far inland. For this freight, the ports are merely transit facilities. By contrast, most of the freight received by water in the Upper Ohio Basin is utilized directly by the port industries and that shipped is principally riverside production. Ohio Basin coal mining, iron and steel, electric power, and chemicals are examples. For the seaports, only a limited portion of the tonnage represents jobs and production in the port area. But, the tonnage of the ports of the Upper Ohio Basin enters directly into the area's production and employment.

Furthermore, most of the seaport tonnages are foreign trade carried mainly in foreign-flag ships, manned by foreign crews, and built in foreign shipyards. But, the tonnages of the Upper Ohio Basin ports are 100 percent domestic, carried exclusively in American vessels manned by American workers, and the industries of shipbuilding, ship repair, and vessel supply are an important sector of the Upper Ohio Basin industrial complex.

Complementary Relationship of River, Rail, and Truck Transportation

River transportation is complementary to efficient railroad and highway carriage, each essential to the industrial strength of the region. The rivers carry large-volume movements at incomparably low cost, usually (but not always) in bulk form--commodities which do not require high speed movement or precise delivery schedules. In 1978, the average truckload in common carrier service was 13.7 tons.[5] The average rail carload was 61.8 tons.[6] But, the smallest standard bargeload on the Monongahela River is 925 tons, and, on the Ohio, the average well exceeds 1,200 tons.

As for cost, in 1978 the average railroad charge per ton-mile (one ton carried one mile) was 2.4 cents.[7] The average charge of the ICC-regulated barge lines on the Mississippi River and its tributaries (including the Ohio) was only 0.6 of a cent, a little more than one-fourth as much.[8]

This does not mean that the railroads and trucks are inefficient. They provide a type of service and carry a mix of commodities largely different from that of the waterways. But, for large-tonnage movements of such cargoes as coal, gasoline, fuel oil, finished steel, bulk chemicals, and bulk building materials, the rivers are the foundation of low costs for the basic industries of the Upper Ohio Basin.

Deterioration and Obsolescence of the Navigation System

The waterway transport foundation is eroding. Since the mid-1950's, 16 new lockage installations of modern dimensions have been constructed on the Ohio River. These are serving well in moving essential products and fuels between the Upper Ohio Basin and distant interior and Gulf Coast centers. But serious choke points remain. The antiquated locks at Gallipolis, Ohio, opened to traffic in 1937, are imposing ever-growing delays on freight movements critical to the community. Modernization is long overdue. Furthermore, three additional outmoded lockage structures farther upstream on the Ohio are due for modernization in the early future.[9] Similarly, on the Monongahela and the Kanawha, a number of existing works, some completed as long ago as 1925, are reaching retirement age. Most of these locks, well suited to the steam vessels of an earlier day, are too small for modern navigation. Most are subject to deterioration, and down times for repair become more frequent and prolonged.

The Long Lead Time for Effective Action

If the water transportation base of the Upper Ohio Basin economy is to be brought into phase with the requirements of the industries it serves, action must be taken promptly. Lead times are long. The period for planning and construction of a typical improvement project falls in the range of five to ten years. Studies looking towards modernization at Gallipolis were begun in the mid-1960's. But, public inattention and bureaucratic stalling delayed authorization even of initial planning until 1976. Such planning is now under way. But, construction has not yet been authorized and, under highly optimistic assumptions, the new Gallipolis works cannot possibly be brought into service before 1989. By that time, a major traffic crisis at the site will be imposing costs on the communities of the upper basin mounting into the hundreds of millions of dollars per year. If a similar crisis, deferred a few years but multiplied several-fold, is to be averted at the locks farther upstream on the Ohio and on the Monongahela and the Kanawha, preliminary studies now under way should be expedited and converted promptly into action.

Other Port Programs in Process

Other port areas are moving forward. A new installation at Mississippi River Locks No. 26 on the doorstep of St. Louis is under construction at an estimated cost of $542 million (in 1979 dollars). Plans are advancing for improvements at the Port of Baltimore at a cost of $110 million, at Mobile of $392 million, and in the area of Baton Rouge and New Orleans of $410 million. These programs are being pressed for "fast tracking", that is for minimizing bureaucratic delays and for prompt construction.

Perspectives for the 21st Century

The vistas of the 21st Century are coming into view. A chemicals industry advancing rapidly into new processes and products with new findings from the laboratories, the coming development of large-volume commercial production of coal-based liquid and gaseous fuels, and the emergence of massive and continuing exports of coal are among these. The steps now being taken towards heightened efficiency of the railroad system and improved maintenance of highways are in harmony with these prospects. If the year 2000 is to find the Upper Ohio Basin industrial complex participating in full measure, action towards modernization of the waterways must move forward in pace with the emerging demands of the future.

Perspectives for the Steel Industry

Among the perspectives of the 21st Century is that of an American steel industry revitalized by new technologies and resting upon a massive new investment of private capital, an industry restored to its former competitive position in the world's markets. In the Pittsburgh District and the rest of the Upper Ohio Basin, the vitality of the steel industry rests directly upon the large-scale waterborne assembly of bulk materials and fuels and, in association with efficient rail and highway transportation, on the distribution of its products by water. It is to the bearing of waterway modernization on the future of the steel industry of the region that we now turn our attention.

Role of the Steel Industry in the Economy of the Upper Ohio Basin

Every sector of the economic life of the Upper Ohio Basin is deeply involved with the vitality of the region's steel industry. The American Iron and Steel Institute identifies all steel works in the region, including those in Ohio and West Virginia, as "The Pittsburgh District", and for convenience we shall use this term.

In 1980 the Pittsburgh District produced 17.5 percent of the nation's output of raw steel.[10] On the basis of this ratio to the industry's performance nationwide, it may be estimated that the industry employed directly in the district about 108,000 people, including administrative personnel, and that these people received wages and salaries in the approximate amount of $2.46 billion.[11] Fringe benefit payments of some $0.78 billion raised the total to something like $3.24 billion of direct steel industry incomes in the Pittsburgh District.[12]

This is not the whole story. In addition, the steel industry made large expenditures locally for materials, fuels, supplies, and services. Coal consumption, for example, approximated 12 million tons, providing jobs for something close to 4,300 Ohio Basin miners in addition to mine executives and clerical workers.[13] To this may be added such purchases as equipment servicing and maintenance, electric energy, fluxing stone, rail and trucking services, lubricants, chemicals, and an innumerable variety of other purchases from local firms providing incomes and jobs beyond measurement. In 1980, the Pittsburgh District steel industry expended some $5.46 billion on such purchases, a goodly part within the Upper Ohio Basin.

The industry is a big taxpayer and, as such, provides a substantial portion of the financing of public services, including schools, hospitals, urban services, local street and highway maintenance, and the like. In 1980, the steel industry of the Pittsburgh District paid an estimated $135 million in taxes other than income and social security, an indication of its financing of local government activity. Every year, several months' pay of such people as street cleaners, fire fighters, and school teachers comes from taxes paid by the Pittsburgh District steel industry.

Nor is this all. Economists universally recognize something called the "multiplier". Simply stated, this means that every person who gets his or her income from a particular industry such as steel spends most of it in the local retail stores and in the purchase locally of professional and other services. This spending provides the incomes of the retail people, service workers, and professionals. The amount of the multiplier varies, but its local impact is variously estimated at 1.6 to 2.0. Taking the lower of these figures, the wages and salaries alone of the Pittsburgh District steel industry generate annually some $1.48 billion of additional income in all occupations throughout the region.

Whether a doctor, dress designer, or restaurant cook, many a citizen of the Upper Ohio Basin, who takes little note of the neighboring steel works, nevertheless pockets money originating in that industry as his daily earnings.

River Transportation of Inbound Fuels and Materials

The logistics of steel production in the Pittsburgh District rest directly on transportation by water. In competition with the Chicago and St. Louis Districts, the waterways are the principal means of keeping the region's furnaces in blast. Chicago District furnaces are all on Lake Michigan and get their iron ore directly by lake. The Pittsburgh District has to get its ore inland from Lake Erie ports by rail, at a rail charge in 1981 of $6.91 per net ton, a cost Chicago doesn't have to bear.[14] To offset this disadvantage, the Pittsburgh District gets all of its coal via the Ohio and Monongahela Rivers. Waterborne coal is the District's competitive salvation.

Mr. Thomas C. Graham, speaking as President of Jones & Laughlin Steel Corporation stated:

> "Because our rivers provide low-cost transportation between the coal mines and the coal consumers, our local steel mills pay about 15 percent less for coal than steel mills in the Chicago area. And, our local power stations pay about 30 percent less than the national average price for the coal they consume."15

There is no practicable alternative means of bringing coal to the District coke ovens and mills. Mr. Graham added:

> "It would be virtually impossible to build sufficient railroad off-loading facilities to handle this tonnage. There's simply not enough open space in our mills."

In addition to coal for the steel industry's direct consumption, the industry gets all of its electricity from regional power plants, which also get their coal via the rivers. Apart from coal, long-haul barge tows, upbound on the Ohio River, bring into the steel works millions of barrels of essential fuel oil every year. The rivers also deliver significant amounts of ferrous scrap and iron ore. Finally, the coke ovens write off a portion of their costs against by-product chemicals shipped to market on the rivers, thus reducing the charges for iron and steel production.

Tons of Waterborne Fuels and Materials Per Steel Industry Job

Bearing in mind the pervasive impact of steel industry jobs and incomes on the over-all prosperity of the Upper Ohio Basin, it is worth while to note the amount of the industry's riverborne fuels and materials per job in the iron and steel establishments. These tonnages may be summed up as follows:

RIVERBORNE FUELS AND MATERIALS RECEIVED AND SHIPPED*

BY

THE STEEL INDUSTRY OF THE PITTSBURGH DISTRICT

PER STEEL INDUSTRY EMPLOTEE

1978

	Net Tons Per Employee
Coal - Steam & Metallurgical - - - - - - -	122.3
Coal for Electricity - - - - - - - - - - -	47.3
Fuel Oil - - - - - - - - - - - - - - - - -	22.8
Ferrous Scrap- - - - - - - - - - - - - - -	3.0
Iron Ore & Concentrates- - - - - - - - - -	8.6
Coal Tar, Benzene, & Toluene (Outbound)- -	5.0
Total Per Pittsburgh Steel District Employee	209.0

*Excludes waterborne shipments of steel products.

SOURCES:

U. S. Dept. of the Army, Corps of Engineers, Waterborne Commerce of the United States, 1978, Part 5, Section 2, New Orleans, Louisiana, 1980.

American Iron and Steel Institute, Annual Statistical Report for 1978, Washington, D. C., 1979.

U. S. Dept. of Energy, Cost and Quality of Fuels for Electric Utility Plants, Washington, D. C., June, 1980.

Steel Product Shipments: Competition in Western and Southern Markets

The transportation of its products has long been critical to the Pittsburgh Steel District. To utilize its capacity and maintain employment, the District has to ship longer distances to penetrate markets closer to competitive origins. In western and southern markets, the District has to compete with the westerly mills in the Chicago and St. Louis Districts. It also has to compete with steel from Japan, West Germany, France, and other overseas origins. In late 1981, the American steel firms priced a common grade of plate at $502 per ton. But, the same grade was available from importers at $427 per ton.[16] In 1980, over 5.5 million tons of foreign steel were unloaded at Gulf Coast customs districts, most of it for consumption in coastal areas.[17]

Growing tonnages of the imported steel, however, move upstream on the Mississippi to such destinations as Greenville, Tulsa, Memphis, and St. Louis. On the Mississippi, all the way from the Gulf to St. Louis there are no locks to impede this upbound movement. But, the Pittsburgh District steel must make its way through the aging and deteriorated locks on the Monongahela and the Upper Ohio and through the mounting congestion of the locks at Gallipolis.

Waterborne Product Shipment Bearing on Community Incomes

In the latest year reported (1978), the Pittsburgh District shipped downstream on the Ohio and the Mississippi a total of 1.7 million tons of steel products with a mill value (at 1981 prices) of about $964.8 million. This steel represented the production of about 11,500 steel industry workers and a value in wages, salaries, and fringe benefits of over $375.0 million.[18] Taking into account, as well, the industry's expenditures locally on materials, fuels, electricity, and supplies, it is obvious that additional millions of dollars of income resting on the waterborne shipments permeate all sectors of the Upper Ohio Basin economy.

Much of the downbound movement consists of high-valued steel pipe and tubing. In 1978, over 30 percent of all the pipe and tubing produced in the Pittsburgh District went to market via the rivers, four-fifths of it all the way to the Gulf Coast. Nearly one-half of the waterborne steel originates on the Monongahela River and to get to market must transit Lock No. 2 on that stream as well as the antiquated and congested locks on the Ohio.

Comparative Waterway and Railroad Transportation Charges

For most of this steel, railroad transportation is not a feasible alternative. In 1981, the barging charge on steel plate from the Monongahela River to Louisville, Kentucky, was $7.61 per ton. The lowest railroad rate was $31.40. From the Monongahela River to Galveston, Texas, the barging charge on both pipe and plate was $21.47 per ton. The lowest railroad rate on volume shipment of pipe was $50.80 and on steel plate $62.40 per ton.[19] These comparisons take on full meaning in the light of competition on the Gulf Coast with Japanese and European steel.

The Challenge of the Closing Years of the Century

Both for inbound receipts and for product shipments, the delays on the rivers are becoming more critical. The movements on the Monongahela have to maneuver their way through antiquated locks built in the days of Calvin Coolidge. All those via the Ohio are clogged in congestion at

Gallipolis. In-depth studies by private consultants for the Army Corps of Engineers forecast that by 1990, in the absence of structural improvement, congestion at Gallipolis will block 15 million tons of cargo per year from passage.[20] The implications for the downbound movements of Pittsburgh District steel, as well as for upbound coal and other materials, are very disturbing. In the 1990's, the emergence of a similar barrier appears likely at the three upstream projects in Pennsylvania.

With its greater distance to important domestic markets than other major steel-producing areas and with the high and sustained levels of steel imports, the Pittsburgh Steel District has been a troubled industry. In recent years, the District has been doing little more than holding its own.

But, its prospects can be good. With a seasoned and capable labor force, an abundance of qualified suppliers in the area, aggressive management, and immediate waterway access to one of the world's largest energy resources in the neighboring coal fields, projection of a strong comeback in the closing years of the century is not unrealistic. But, if these prospects are to be realized, it will be only in association with breaching the barrier of the antiquated, undersized, and congested locks which today progressively erode the foundations of the regional industry.

FOOTNOTES

[1] U. S. Dept. of the Army, Corps of Engineers, Waterborne Commerce of the United States, 1978, Part 2, New Orleans, Louisiana, 1980.

[2] U. S. Dept. of the Army, Corps of Engineers, Gallipolis Locks and Dam Replacement, Ohio River, Main Report, Huntington, West Virginia, District, 1981.

[3] Nonagricultural employment in the Upper Ohio Basin estimated from 1978 ratios of employment to population in each Upper Ohio Basin state. See: U. S. Dept. of Commerce, Statistical Abstract of the United States, 1980, Washington, D. C., 1981, pages 12 and 412.

[4] Unless otherwise specified, all waterborne tonnages cited herein are as reported by the U. S. Dept. of the Army, Corps of Engineers, Waterborne Commerce of the United States, 1978, U. S. Army Engineer District, New Orleans, Louisiana, 1980.

[5] American Trucking Associations, Inc., American Trucking Trends, 1979-1980, Washington, D. C., 1981, page 64.

[6] Association of American Railroads, Yearbook of Railroad Facts, 1981 Edition, Washington, D. C., 1981, page 40.

[7] Ibid., page 33.

[8] Interstate Commerce Commission, Statement No. 650, Washington, D. C., 1979.

[9] These three and their respective mileages downstream from Pittsburgh are Emsworth, 6.2 miles; Dashields, 13.3 miles; and Montgomery Island, 31.7 miles. All three are in the State of Pennsylvania.

[10] American Iron and Steel Institute, Weekly Raw Steel Production, Washington, D. C., respective issues for 1980.

[11] Under the category "Blast Furnace and Basic Steel Products" (SIC 331), the U. S. Bureau of the Census reports in the Census of Manufactures for 1977 employment of 73,500 workers in the Pittsburgh SMSA. However, this does not include persons employed at locations away from the steelmaking works, such as regional and central offices.

[12] Data on wages, salaries, fringe benefits, coal consumption, purchase expenditures, and taxes are calculated at 17.5% of data for the American steel industry as reported by the American Iron and Steel Institute, Annual Statistical Report for 1980, Washington, D. C., 1981.

[13] Coal mine employment calculated from Pennsylvania output data reported by the U. S. Dept. of Energy, Coal Production - 1979, pages 66 and 76, Washington, D. C., 1981.

[14] "Rail and Lake Freight Rates on Iron Ore and Pellets", Skillings' Mining Review, Duluth, Minnesota, January 10, 1981, page 58.

[15] Address before the Tri-State Waterways Conference, Waterways Association of Pittsburgh, Pittsburgh, Pennsylvania, April 11, 1977.

[16] As reported in The Wall Street Journal, August 19, 1981, page 6.

[17] American Iron and Steel Institute, Annual Statistical Report for 1980, Washington, D. C., 1981, page 51.

[18] Production, wages, salaries, and fringe benefits per worker as reported by the American Iron and Steel Institute, Annual Statistical Report for 1980, Washington, D. C., 1981, pages 2 and 3.

[19] Rates as quoted by originating barge lines and railroads serving the Pittsburgh District.

[20] U. S. Dept. of the Army, Corps of Engineers, Gallipolis Locks and Dam Replacement, Ohio River, Huntington, West Virginia, District, Appendix D, 1981, page 18.

DINAMO (The Association for the Development of Interstate Navigability
on the Allegheny, Monongahela and Ohio)

THE URGENCY OF MODERNIZATION OF THE INLAND WATERWAY SYSTEM TO THE ECONOMY AND THE COAL INDUSTRY OF THE UPPER OHIO RIVER BASIN SYSTEM

The Upper Ohio Basin encompasses all of Western Pennsylvania, centered in the Pittsburgh Metropolitan Area, in addition to eastern Ohio and most of West Virginia, including the city of Charleston and the Kanawha River Valley.

Some eight to ten million people live and work in the region, deriving their livelihood, directly and indirectly, from the region's commerce, industries, and resources, largely water-based.

Low-cost mass transportation on the four interconnected rivers of the area is fundamental to this livelihood.

The antiquated navigation infrastructure facilities, constructed in an earlier generation, are a depressant on economic progress and the vitality of the region's economy can be sustained only by timely actions towards modernization of the system.

Magnitude and Character of the Upper Ohio Basin Port Area

The Upper Ohio Basin is the leading terminal port area of the largest navigable inland waterway system in the world, the Ohio-Mississippi River system, connecting the area with such distant commercial centers as St. Louis, Chicago, Minneapolis, Kansas City, Tulsa, New Orleans, Houston, Mobile, and northern Florida, among many others. These connections supply the region with a massive inflow of essential waterborne materials and fuels and provide a low-cost outlet for high-valued products for distribution throughout the continental interior and the Gulf Coast.

Most such port areas are concentrated on a single city, such as St. Louis and Chicago. But, that of the Upper Ohio Basin reaches into all sectors of the region. The Allegheny, Monongahela, and Kanawha Rivers combine with the main stream of the Ohio southward to the locks at Gallipolis to interlace the area with 570.5 miles of navigable channels with a minimum depth of nine feet navigable 12 months of the year. Not only does the river system connect the area with distant centers. In addition, the network generates a large-volume movement of commodities and fuels internal to the region and essential to the vitality of the regional economy.

In 1978 (the latest year reported) the river system carried 39.8 million tons of cargo between the Upper Ohio Basin and downstream Ohio and Mississippi Basin and Gulf Coast points. In addition, the system moved 32.9 million tons within the region, for a total tonnage of 72.7 million. This amounts to about 60 tons for every nonagricultural job in the area.

Comparison with Major Seaports

The Upper Ohio Basin port area surpasses a number of large seaports in tonnage moved, such as Baltimore with 46.8 million tons in 1978, or Hampton Roads with 41.0 million, and compares well with the entire Delaware River from Trenton and Philadelphia to the sea, with 132.4 million tons.[1]

But, this comparison is not complete. Most of the freight moving through the deep-water ports is carried by rail and truck between the ports and communities far inland. For this freight, the ports are merely transit facilities. By contrast, most of the freight received by water in the Upper Ohio Basin is utilized directly by the port industries and that shipped is principally riverside production. Ohio Basin coal mining, iron and steel, electric power, and chemicals are examples. For the seaports, only a limited portion of the tonnage represents jobs and production in the port area. But, the tonnage of the ports of the Upper Ohio Basin enters directly into the area's production and employment.

Furthermore, most of the seaport tonnages are foreign trade carried mainly in foreign-flag ships, manned by foreign crews, and built in foreign shipyards. But, the tonnages of the Upper Ohio Basin ports are 100 percent domestic, carried exclusively in American vessels manned by American workers, and the industries of shipbuilding, ship repair, and vessel supply are an important sector of the Upper Ohio Basin industrial complex.

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[1] Unless otherwise specified, all waterborne tonnages cited herein are as reported by the U. S. Dept. of the Army, Corps of Engineers, Waterborne Commerce of the United States, 1978 and 1979, U. S. Army Engineer District, New Orleans, Louisiana, 1980.

Complementary Relationship of River, Rail, and Truck Transportation

River transportation is complementary to efficient railroad and highway carriage, each essential to the industrial strength of the region. The rivers carry large-volume movements at incomparably low cost, usually (but not always) in bulk form - commodities which do not require high speed movement or precise delivery schedules. In 1978, the average truckload in common carrier service was 13.7 tons.[1] The average rail carload was 61.8 tons.[2] But, the smallest standard bargeload on the Monongahela River is 925 tons, and, on the Ohio, the average well exceeds 1,200 tons.

As for cost, in 1978, the average railroad charge per ton-mile (one ton carried one mile) was 2.4 cents.[3] The average charge of the ICC-regulated barge lines on the Mississippi River and its tributaries (including the Ohio) was only 0.6 of a cent, a little more than one-fourth as much.[4]

This does not mean that the railroads and trucks are inefficient. They provide a type of service and carry a mix of commodities largely different from that of the waterways. But, for large-tonnage movements of such cargoes as coal, gasoline, fuel oil, finished steel, bulk chemicals, and bulk building materials, the rivers are the foundation of low cost for the basic industries of the Upper Ohio Basin.

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[1] American Trucking Associations, Inc. American Trucking Trends, 1979-1980, Washington, D. C., 1971, page 64.

[2] Association of American Railroads, Yearbook of Railroad Facts, 1981 Edition, Washington, D. C., 1981, page 40.

[3] Ibid., page 33.

[4] Interstate Commerce Commission, Statement No. 650, Washington, D. C., 1979.

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$110 million, at Mobile of $392 million, and in the area of Baton Rouge and New Orleans of $410 million. These programs are being pressed for "fast tracking", that is, for minimizing bureaucratic delays and for prompt construction.

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2. Waterway Modernization Potentials for the Region's Coal Industry

The outlook for the U. S. coal industry during the coming decades glows with promise. But, in the absence of expedited modernization of their navigable rivers, prospects remain clouded for the mining communities of the Upper Ohio Basin. As will be shown, by 1990, some three billion dollars worth of Upper Ohio Basin annual coal sales and about 47,000 mining jobs are at stake.

The country's transition to coal is well under way. U. S. coal production was only 598.6 million tons in 1973, the year of the Arab oil embargo. In 1980, it had jumped to 830.0 million.[1] The U. S. Department of Energy has issued a medium production forecast for 1990 of 1,442 million tons and for 1995 of 1,878 million.[2] The Mid-America Ports Study, sponsored by the U. S. Department of Commerce, goes farther. Mid-America forecasts for 1990 a production of 1,543.8 million tons and, for 2000, 2,445.5 million.[1] Rising exports brighten the outlook. Admittedly, the Appalachian area lacks a reserved seat on this bandwagon because much of the increase will be western coal. But, even this second-class status is being downgraded. The increased clogging of Appalachia's antiquated navigation facilities blocks the way to essential markets.

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[1] U. S. Dept. of Energy, Energy Information Administration, Energy Data Report, DOE/EIA-021C, Washington, D. C., 1981.

[2] U. S. Dept. of Energy Energy Information Administration, Annual Report to Congress, 1980, Volume Three: Synopsis, DOE/EIA-0173, Washington, D. C., May, 1981, page 31.

Costs of Energy Transportation: Rail, Pipeline, and Waterway

The main barrier to increased use of coal is the transportation cost. In 1979, the average railroad charge per million BTU's for hauling coal 100 miles was 9.15 cents.[2] The average pipeline charge per million BTU's of coal-competitive fuel oil was only 2.64 cents.[3] The actual fuel oil advantage was even sharper because pipeline routings are less circuitous. On those sections of the inland rivers unimpeded by outmoded and congested locks the corresponding charge for carrying coal 100 miles, at 2.71 cents per million BTU's, was about the same as the oil pipeline.[4] Although the rivers are more circuitous than the pipelines, with modernization they can be made competitive.

Coal Consumption Potentials in Coastal Regions

Because of the present transportation handicap, most coal consumption in the United States takes place in the mining regions, mainly in the Ohio River Basin, the central Mississippi Basin (principally Illinois and western Kentucky), and the Great Plains (Colorado, Montana, and Wyoming). The projected increases in domestic coal consumption will have to occur in the populous coastal areas.

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[1] U. S. Dept. of Commerce, National Technical Information Service, Tippetts-Abbett-McCarthy-Stratton, Mid-America Ports Study, Volume 1, Main Report, New York, New York, 1979, page 172.

[2] U. S. Dept. of Transportation, Federal Railroad Aministration, 1979 Carload Waybill Statistics, Statement TD-1, Washington, D. C., 1980, page 18.

[3] Transportation Association of America, Transportation Facts and Trends, Washington, D. C., 1981, pages 2 and 3.

[4] The 2.71-cent estimate is based on a charge of 6.0 mills per ton-mile and an energy content of 22.14 million BTU's per ton, as reported by the U. S. Dept. of Energy for 1979.

In 1978, the coal-producing states of the Ohio and Mississippi Basins derived 36.5 percent of their energy consumption from coal. This was fairly close to the optimum. But, coal's share on the Atlantic Coast was only 11.0 percent, on the Gulf Coast only 8.0 percent, and on the Pacific Coast only 1.9 percent. This is because the coastal states produced little or no coal, and the cost of hauling it there from the interior was too high. Oil and gas markets are national. Coal's has been mainly regional.

Some Appalachian coals are already reaching domestic consumers on the Atlantic Coast, either all-rail or by rail to coastal ports and, from there, via coastwise ships. However, coastal consumption remains small. The energy from Appalachian coal also reaches the Atlantic seaboard via long-distance electric transmission lines from Ohio River power plants.

But, the big growth prospect for Appalachian coal lies in the lower Mississippi Valley and on the Gulf Coast. In 1978, if Gulf Coast coal consumption had been at the same percentage of total energy as in the coal-producing states (36.5 percent), the Gulf area would have consumed an additional 200.8 million tons. Progressively in the future, economic growth will enlarge this. For 1990, we are looking at a potential consumption of some 300 million tons or more on the Gulf Coast.

The Outlook for Coal Exports

A big surge in coal exports may be added to this. In 1979, coal exports from the U. S. were 65.7 million tons, mostly of metallurgical grades. In 1980, growing exports of steam coal began, and the two categories combined reached 91.3 million.[1] The National Coal Association estimates that coal exports will reach 156 million tons in 1990.[2] Much of this, of course, will move via rail to Atlantic Coast ports. Exports to the Far East will move via the Pacific. Gulf ports, however, will handle a large portion. Shipments via the rivers to the Gulf have the advantage of direct in-stream transfer from barge to ship without occupying high-cost dock frontage.

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[1] The Journal of Commerce, New York, N. Y., April 28, 1981, page 35.

[2] U. S. Congress, Office of Technology Assessment, Coal Exports and Port Development, Washington, D. C., April, 1981, page 5. The projections are stated in metric tons, converted here into U. S. short tons. (One metric ton = 2,205 lbs.)

Major expansion of Gulf coal terminals, both for domestic coastwise carriage and for exports, is under way. Between Baton Rouge and the Gulf, as of 1980, existing and planned new coal terminals for ocean shipment had a programmed capacity for 1985 of 58 million tons and, for 1990, of 111 million tons.[1]

Expansion at the Port of Mobile should be added to these potentials. The Tennessee-Tombigbee Waterway, scheduled for completion in 1987, will link the Ohio Basin with Mobile and save 379 miles of river distance in comparison with the present Mississippi River-Gulf Intracoastal routing. In addition, the present roundabout routing is obstructed by the antiquated lockage facility in New Orleans which now is the sole connection between the Mississippi and the eastern Gulf Intracoastal Waterway. The Tennessee-Tombigbee will thus provide a shorter haul and urgently needed capacity between the Ohio Basin and the eastern Gulf Coast. Coal will be the principal cargo of the southbound movements on the Tennessee-Tombigbee. About 18 million tons are projected for the first year of operation, both for export and for Gulf Coast consumption.[2]

Competitive Position of Upper Ohio Basin Coal

With modernized navigation works in the Upper Ohio Basin, the region could share substantially in these prospects. Admittedly, the Upper Ohio is farther from the Gulf Coast than competitive origins in western Kentucky, Indiana, and Illinois. Yet, in 1979, in spite of the outmoded locks and congestion on the Ohio River and its tributaries, the Upper Ohio region shipped by river 13.4 million tons of coal to points in the lower Ohio and Mississippi Valleys and on the Gulf Coast.[3] In competition with western coal, much of the Upper Ohio Basin has the advantage of waterside mine locations, whereas waterborne coal from Wyoming, Illinois, and other westerly origins commonly originates inland by rail, adding not only to cost but to the uncertainties of rail-water cooperation. Furthermore, with the surge in demand for Gulf Coast consumption and for exports, rising mine prices in western Kentucky and Illinois will enhance the competitive strength of the Upper Ohio coal.

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[1] Board of Commissioners of the Port of New Orleans, U. S. Coal Export Opportunities and the Critical Need for Deepening the Lower Mississippi River Channel, New Orleans, Louisiana, July, 1980, page 11.

[2] Data on the Tennessee-Tombigbee Waterway are as reported by the Tennessee-Tombigbee Waterway Authority, The Tennessee-Tombigbee Waterway, Columbus, Mississippi, March, 1981.

[3] U. S. Dept. of the Army, Op. Cit., Part 5, 1979. The shipping region includes western Pennsylvania, eastern Ohio, all of West Virginia, and eastern Kentucky.

The U. S. Office of Fossil Energy has issued the following statement:

> "The cost of transportation is a large part of the total cost of delivering clean energy from coal . . .
>
> "The river barges, Great Lakes freighters, and intercoastal freighters of the waterway system provide low cost delivery of coal to distant markets which are beyond economical reach by rail or truck. Coal is the largest commodity movement on the inland waterway system, a network of over 25,000 miles of navigable waterways."[1]

Upper Ohio Basin Waterborne Coal Potentials

The coal industry of the Upper Ohio Basin thus has a high stake in a modernized river system. In fact, most of the coal mined in western Pennsylvania, Ohio, and northern West Virginia which is not consumed locally is carried by river. In 1979, Districts 2, 3, 4, and 6 shipped 78.2 million tons by rail and water. Of this total, 52.5 percent (41.0 million tons) went to consumers via the Monongahela, Allegheny, and Ohio Rivers.[2] District 8 (mainly southern West Virginia and eastern Kentucky) shipped an additional 25.8 million tons via the Kanawha, the Big Sandy, and the Ohio. Much of this went into the Middle West by way of the connecting waters of the Tennessee, Mississippi, and other western rivers.

If - but only if - the region's waterways are modernized, the outlook will be very promising. In 1979, the total river shipments of the Upper Ohio (Districts 2, 3, 4, 6, and 8) amounted to 66.8 million tons. The Mid-America Ports Study projects a growth of coal production from 1975 to 1990 in all the states on the Mississippi River and its tributaries of

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[1] Tetra Tech, Inc., Energy from Coal, a State-of-the Art Review, Prepared for the Office of Fossil Energy, U. S. Energy Research and Development Administration, Arlington, Virginia, 1978, page V-1.

[2] Rail shipments as reported by the U. S. Dept. of Energy, Energy Information Administration, Bituminous and Subbituminous Coal and Lignite Distribution, 1979, Washington, D. C., 1980. Waterway shipments as reported by the U. S. Dept. of the Army, Corps of Engineers, Waterborne Commerce of the United States, 1979, Part 2, New Orleans, Louisiana, 1982.

67.9 percent.[1] This is a moderate projection. It is less than the nationwide growth rate because it omits the rapidly rising output in the Great Plains states, such as Wyoming and Montana. Even so, if output of the Upper Ohio Basin were to share equally with that of such areas as Illinois and western Kentucky, shipments by the rivers of western Pennsylvania, Ohio, West Virginia, and eastern Kentucky in 1990 would amount to 100.5 million tons. In the year, 2000, 165.5 million tons would so move.

The Waterway Relationship to Railroad Transport

It should be emphasized that the increase in waterway shipments would be accompanied by a rapid growth in railroad shipments, as well. Exports via the Atlantic Coast are projected to rise rapidly. In fact, the rise in waterway movements would stimulate railroad shipments. Export coal via New Orleans and Mobile will be directly competitive with that via the Atlantic, putting pressure on the eastern railroads to moderate rates and improve service on the Appalachian coal bound for Atlantic ports. In this way, waterway competition would stimulate railroad volume and increase aggregate U. S. exports in competition with foreign sources.

The Prospective Impact on Coal Mining Incomes and Employment

The contribution of the projected growth in waterborne shipments on mining incomes would be very high. In 1979, the average mine price in the five districts of the Upper Ohio Basin was $30.51 per ton.[2] At this price, the sales value of the 1979 river shipments of coal from the region was about $2.04 billion. On the 100.5 million tons projected to move by river in 1990, the sales value at the 1979 price would amount to $3.06 billion. The corresponding sales value in 2000 may be projected at $5.05 billion. In other words, the projected growth in river shipments of coal from the Upper Ohio Basin would mean an increment to the region's 1990 income of about $1.02 billion and in 2000 of over $3.0 billion.

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[1] U. S. Dept. of Commerce, National Technical Information Service, Tippetts-Abbett-McCarthy-Stratton, Mid-America Ports Study, Volume 1, Main Report, New York, New York, 1979, page 172.

[2] U. S. Dept. of Energy, Energy Information Administration, Coal Production-1979, Washington, D. C., 1981, page 69.

The Outlook for Jobs. This revenue would be widely diffused throughout western Pennsylvania, West Virginia, eastern Ohio,and eastern Kentucky. In 1977, the average production per coal mining employee in these states was 2,124 tons.[1] At this rate, in 1979, about 31,451 employees were engaged in the production of the coal shipped on the rivers of the four-state area. At the projected 1990 tonnage, these jobs would soar to 47,336, an increase of over 50 percent. In the year 2000, about 77,025 mine employees would earn their living by the production of coal for river shipment.

The Earnings Outlook. No one knows what will happen to wage levels between now and the end of the century. But, we do know that in 1979, the earnings of coal mine employees in the Upper Ohio Basin amounted to about $8.31 per ton produced.[2] At this rate, the coal delivered for shipment on the region's rivers represented earnings of $555.1 million. The earnings on riverborne coal projected for 1990, even at the 1979 hourly rate, would rise to $835.5 million, and for 2000 to $1,375.4 million. It may be borne in mind that these projections are derived from the very thorough and extensive analyses of the Mid-America Ports Study and that they represent only the Upper Ohio Basin share of Mississippi Basin production - exclusive of the higher rate of growth on the Great Plains.

Mining Industry Purchases. Obviously benefits to the households of the region do not stop with payrolls. The mining industry is a big buyer of a wide variety of materials, supplies, equipment, and services - mostly in the mining areas. In 1979, these purchases amounted to about $17.07 per ton produced, a total of some $1.14 billion for the waterborne coal shipped in the Upper Ohio Basin. Applying, again, the Mid-America projections, it is evident that in 1990 this would mean purchases of $1.72 billion and in 2000 of $2.83 billion.

Benefits to Local Government Services. The coal industry is a big taxpayer and, as such, provides a substantial portion of the financing of public services, including schools, hospitals, urban services, local street and highway maintenance, and the like. Professor William H. Miernyk of West Virginia University has estimated that the state is receiving more than $3.3 billion in taxes from the coal industry between 1973 and 1990.[1] This is on the modest assumption of a mine price of only $22.78 per ton and a business and occupations tax of 3.85 percent. Every year, several months' pay of such people as street cleaners, fire fighters, and school teachers comes from taxes paid by the Upper Ohio Basin coal industry, much of it totally reliant on waterway transportation.

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[1] U. S. Dept. of Commerce, Bureau of the Census, 1977 Census of Mineral Industries, Major Group 12, "Bituminous Coal and Lignite Mining", Washington, D. C., 1978, page 12A-5.

[2] U. S. Dept. of Commerce, Bureau of the Census, Op. Cit., 1977, page 12A-5, updated to 1979 by 1977-1979 collective bargaining settlements as reported by the U. S. Dept. of Commerce, Bureau of the Census, Statistical Abstract of the United States, 1980, Washington, D. C., 1981, page 427.

Community-Wide Diffusion of Benefits. Nor is this all. Economists universally recognize something called the "multiplier". Simply stated, this means that every person who gets his or her income from a particular industry such as coal spends most of it in the local retail stores and in the purchase locally of professional and other services. This spending provides the incomes of the retail people, service workers, and professionals. The amount of the multiplier varies, but its local impact is variously estimated at 1.6 to 2.0.

Taking the lower of these figures, in 1979, the direct expenditures of the coal industry, merely for the production of coal carried by water, generated additional income in the region of some $1.0 billion and, with adequate navigation works, may be projected for 1990 at $1.5 billion and for 2000 at $2.5 billion.

Whether a doctor, dress designer, or restaurant cook, many a citizen of the Upper Ohio Basin, who takes little note of the mining industry, nevertheless pockets money originating in that industry as his daily earnings. During the coming years, the benefits of improved navigation works will permeate every sector of Appalachian life.

The Transmission of Coal Energy by Wire

The energy of coal is shipped from the Upper Ohio Basin, not only by water and rail, but also by water and wire. Coal's biggest customer is the electric power industry. The low cost of coal received by water at the riverside generating stations on the Upper Ohio and its tributaries has converted the region into a major exporter of electric energy. A survey of 10 large stations on the riverbanks in 1975 reported an aggregate capacity of 28,000 megawatts. But, the peak load of their service areas aggregated only 6,100 megawatts. The remainder was available for transmission to outside areas. System interconnections involved 22 electric utility companies with service areas in 11 states, extending from the Canadian border to northern Alabama and from the Atlantic Coast to the Mississippi.

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[1] Skillings' Mining Review, Duluth, Minnesota, April 17, 1976, page 20.

Through these interconnections, backup power in the Upper Ohio Basin provides relief from shortages in cities as far away as Detroit, New York, and eastern Virginia. In short, the low cost of the waterway receipt of coal at the power plants has converted the Upper Ohio Valley into a central bank of reserve energy, relieving shortages throughout the Northeast Quadrant of the United States. At times the lights of New York owe their brilliance to waterborne coal produced in the Upper Ohio River Basin. Only a modernized waterway system will sustain this critical role in future years.

Coal and the Upper Ohio Basin Steel Industry

The second largest customer of the mining industry is steel. The Pittsburgh District consumes coal, not only for the district's iron and steel production, but, in addition, for supplying coke to the Cleveland and Chicago Districts. In 1979, the steel industry nationwide consumed 1,052 lbs. of coal for each ton of raw steel produced.[1] At this rate, the Pittsburgh District (including the riverside steel works in West Virginia and Ohio) consumed an estimated 12.6 million tons of coal for its own ferrous products.[2] Total coke shipments to other districts are not publicly reported, but the Jones & Laughlin Steel Corporation, alone, ships some two million tons out of the District yearly, and the production of this coke represents about 2.86 million tons of additional coal consumption.[1] Altogether, it appears safe to say that the steel industry of the Pittsburgh District represents a market for some 15 million tons of Upper Ohio Basin coal per year and something in excess of 7,000 coal mine jobs.

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[1] American Iron and Steel Institute, Annual Statistical Report, 1980, Washington, D. C., 1981, pages 55 and 67.

[2] American Iron and Steel Institute, "Weekly Raw Steel Production". This publication reported the production of 23,986,000 tons of raw steel in the Pittsburgh District in 1979.

In competition with the Chicago and St. Louis Districts, the waterways are the principal means of keeping the region's furnaces in blast. Chicago District furnaces are all on Lake Michigan and get their iron ore directly by lake. The Pittsburgh District has to get its ore inland from Lake Erie ports by rail, at a rail charge in 1981 of $6.91 per net ton, a cost Chicago doesn't have to bear.[2] To offset this disadvantage, the Pittsburgh District gets all of its coal via the Ohio and Monongahela Rivers. Waterborne coal is thus the District's competitive salvation.

Mr. Thomas C. Graham, speaking as President of Jones & Laughlin Steel Corporation, stated:

> "Because our rivers provide low-cost transportation between the coal mines and the coal consumers, our local steel mills pay about 15 percent less for coal than steel mills in the Chicago area. And, our local power stations pay about 30 percent less than the national average price for the coal they consume.
>
> "It would be virtually impossible to build sufficient railroad off-loading facilities to handle this tonnage. There's simply not enough open space in our mills."[3]

Virtually all of the coal consumed by the Pittsbugh District steel industry is received by river barge. Most of the tonnage moves downstream through the outmoded locks of the Monongahela River, but a large portion originates in the Huntington, West Virginia, area. Between Huntington and the upper river steel works, mounting congestion in the old Gallipolis locks progressively hampers the movement. During the 1990's the other three Ohio River locks in the Pittsburgh area are expected to become similarly congested.

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[1] The Journal of Commerce, New York, February 22, 1982, page 4C. Conversion factor: 2,863 lbs. of coal per ton of coke.

[2] Skillings' Mining Review, "Rail and Lake Freight R ates on Iron Ore and Pellets", Duluth, Minnesota, January 10, 1981, page 58.

[3] Address before the Tri-State Waterways Conference, Waterways Association of Pittsburgh, Pittsburgh, Pennsylvania, April 11, 1977.

Coal Liquifaction and Gasification

The emergence towards the end of the century of a growing supply of liquid and gaseous fuels synthesized from coal will likewise rest on a waterway transport base. For economy of operation, the liquifaction and gasification plants must be located in the vicinity of the mines, preferably at the mine mouth. But, because the processes are large users of water, much of the prospective capacity will be sited on the navigable rivers, both for water supply and for receipt of coal by barge. Much of the liquid and gaseous production will move to consumers by pipeline, but, as in the case of the present carriage of refined petroleum products, a large increment to carriage of such products on the inland rivers may be projected. Such rivers as the Monongahela, the Kanawha, and the Upper Ohio will play a mounting role in the nation's supply of liquid and gaseous energy in magnitudes which cannot now be measured.

Modernization of Terminals and Waterways Serving Western Coal

If the coal industry of the Upper Ohio Basin is to share in the mounting volumes of nationwide sales of this fuel, river modernization will be critical to its success. In the competition for the Gulf Coast market, both for domestic consumption and for export, the western coals are moving ahead rapidly. The Burlington Northern Railroad carries low-sulphur coal from the Powder River Basin of Wyoming in unit trains of 11,000 tons for waterway transshipment at the American Commercial Barge Lines terminal in St. Louis, destined for the Cajun Electric Power plant at New Roads, Louisiana.[1] This rail-water movement is scheduled at six million tons in 1984. Eighty miles south at Cora, Illinois, the Missouri Pacific Railroad has teamed with the Federal Barge Lines for a similar southbound movement of Illinois coal. Barge terminals at Keokuk, Iowa, and on the Ohio River at Metropolis, Illinois, hold potentials of comparable magnitude. Altogether, these four transfer points represent a capacity for the southbound movement of coal to the Gulf Coast of 50 million tons a year.

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[1] Information on rail-water and water-rail transfer projects is as reported in various issues of Skillings' Mining Review, Duluth, Minnesota, and the Journal of Commerce, New York, New York.

Similar rail-water terminals are opening on the Lower Ohio River at Russell and Wilder, Kentucky. The Southern Railway receives waterborne coal via the Tennessee River at its barge-rail terminal at Pride, Alabama, for overland delivery to the plants of the Georgia Power Company. The Pride terminal has a capacity of 10 to 12 million tons per year.

From St. Louis south, there are no locks on the Mississippi River to impede this traffic from the mines of either Wyoming or Illinois. Western Kentucky has the advantage of modern Ohio River locks 1,200 feet long for its connection with the Mississippi. For downbound movements from Keokuk, Iowa, the new 1,200-foot Lock No. 26 on the Mississippi is under construction near St.Louis.

The Mounting Costs of Congestion on the Upper Ohio

Meanwhile, coal traffic serving the Upper Ohio Basin is snarled in antiquated and inadequate facilities on which, at the time of this writing (1982), no construction is in progress or even authorized. Between western Pennsylvania and the expanding downstream coal markets, four old lockage structures impede both the downbound movements and those moving north from the Huntington District. Congestion at the Gallipolis locks is an immediate problem. In 1979, the average congestion delay per tow transited at Gallipolis had risen to 8.0 hours. Similar difficulties are emerging at the three upstream facilities near Pittsburgh and at the Winfield locks on the Kanawha. In the absence of modernization, projected average delay times per tow transit at the respective locks are as shown in Table I.

TABLE I.

PROJECTED AVERAGE HOURS OF DELAY PER TOW TRANSIT AT RESPECTIVE LOCKAGE INSTALLATIONS ON THE OHIO AND KANAWHA RIVERS

(Number of Hours of Average Delay Per Tow Transit)

	Ohio River				Kanawha
Year	Gallipolis	Emsworth	Dashields	Montgomery Is.	River-Winfield
1979	8.0*	n. r.	n. r.	n. r.	n. r.
1990	32.0	4.1	2.3	1.0	4.7
2000	38.4	4.4	2.5	1.0	8.1

*Actual 1979 average delay.

SOURCE: U. S. Dept. of the Army, Corps of Engineers, Huntington, West Virginia, District, Gallipolis Locks and Dam Replacement, Ohio River, General Design Memorandum, Huntington, West Virginia, February, 1981, Appendix O, pages O-27 and O-36.

The cost of the delays projected in Table I would be very high. It will be observed that in 1990 the total lost time between Pittsburgh and any point downstream from Gallipolis would aggregate 39.4 hours. For a one-way movement of cargo and the return of empty barges, the two-transit loss would be doubled to 78.8 hours. Waterway carriers report a 1981 delay cost at about $400 per hour per tow. For a 10,000-ton movement of coal, the 78.8-hour delay would thus amount to a penalty of $3.15 per ton. For the distance from Pittsburgh to Gallipolis, in the absence of congestion, the cost of this movement at 1981 levels, would amount to something close to $2.50 per ton. By adding the $3.15 congestion penalty, the total cost, at about $5.65, would be more than doubled. Between Charleston, West Virginia, and any point downstream from Gallipolis, the 1990 delay would amount to 36.7 hours, for a one-way cost of $14,680 for each tow transit, or $29,360 for moving one way loaded and returning empty. Western coals do not face the prospect of any such handicaps.

The Impairment of Coal Sales

In the absence of relief at Gallipolis, it is reliably estimated that in 1990 about 23 percent of the projected traffic will be driven from the river.[1] Some will be diverted to other origins and other modes of trasnportation, the coal traffic notably to western coals. Some won't move at all. With the 1990 coal transits projected at 36.0 million tons, a 23 percent loss would mean the loss of over eight million tons by the upper basin coal industry. The corresponding figures for 2000 are a traffic shrinkage of 30 percent and, on a projected coal traffic demand of 42.4 million tons, the loss of close to 13 million tons of sales.

The Urgency of Expeditious Action

The importance of modernization and added capacity at Gallipolis was clearly recognized as long ago as the early 1960's. Evaluation studies were authorized in 1962. The first report, issued by the Corps of Engineers in 1969, was highly favorable. But, with long procrastination, the report became osbolete, and a second, also favorable, was issued in 1974. This, too, lay on the shelf, so another had to be prepared. It was completed in 1981 and reported a ratio of benefits to costs of 12.9 to 1.0. In the 20 years following 1962, all that occurred was the authorization of engineering and design work.

Should the project be put on the necessary fast track, with expeditious progress, the earliest it could be brought to completion would be 1989.

FOR THE COAL INDUSTRY OF THE UPPER OHIO BASIN, MODERNIZATION OF PRESENT ANTIQUATED AND INADEQUATELY-SIZED LOCKS AND DAMS IN THE UPPER OHIO RIVER SYSTEM IS IMPERATIVE.

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[1] U.S. Department of the Army, Corps of Engineers, Huntington, West Virginia, District, Op. Cit., pages 0-34 and 0-35.

THE URGENCY OF MODERNIZATION OF THE INLAND NAVIGATION SYSTEM TO THE ECONOMY AND THE CHEMICALS INDUSTRY OF THE UPPER OHIO RIVER BASIN

Prepared for:
DINAMO
411 Seventh Avenue, Suite 1102
Pittsburgh, Pennsylvania 15219

By:
Marvin J. Barloon
Carlton Professor of Economics (Em.)
Case Western Reserve University
Cleveland, Ohio 44106

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1. THE CRITICAL ROLE AND DETERIORATING STRUCTURE OF THE REGION'S WATERWAY SYSTEM

This report offers some specifics as to the importance of the navigable rivers of the Upper Ohio Basin in the outlook for future employment and prosperity in the region. The Upper Ohio Basin encompasses all of western Pennsylvania, centered on the Pittsburgh Metropolitan Area, in addition to eastern Ohio and most of West Virginia, including the city of Charleston and the Kanawha River Valley. Some eight to ten million people reside in the region, deriving their livelihood, directly and indirectly, from the region's commerce, industries, and resources, largely water-based.

Low-cost mass transportation on the four interconnected rivers of the area is fundamental to this livelihood. But, the antiquated navigation works, constructed in an earlier generation, are a drag on progress, and the vitality of the region's economy can be sustained only by timely action towards modernization.

Magnitude and Character of the Upper Ohio Basin Port Area

The Upper Ohio Basin is the leading terminal port area of the largest navigable inland waterway system in the world, the Ohio-Mississippi River System, connecting the area with such distant commercial centers as St. Louis, Chicago, Minneapolis, Kansas City, Tulsa, New Orleans, Houston, Mobile, and northern Florida, among many others. These connections supply the region with a massive inflow of essential waterborne materials and fuels and provide a low-cost outlet for high-valued products for distribution throughout the continental interior and the Gulf Coast.

Most such port areas are concentrated on a single city, such as St. Louis and Chicago. But, that of the Upper Ohio Basin reaches into all sectors of the region. The Allegheny, Monongahela, and Kanawha Rivers combine with the main stream of the Ohio southward to the locks at Gallipolis to interlace the area with 570.5 miles of navigable channels. with a minimum depth of nine feet navigable 12 months of the year.[1] Not only does the river system connect the area with distant centers. In addition, the network generates a large-volume movement of commodities and fuels internal to the region and essential to the vitality of the regional economy.

In 1979 (the latest year reported) the river system carried 40.7 million tons of cargo between the Upper Ohio Basin and downstream Ohio and Mississippi Basin and Gulf Coast points. In addition, the system moved 35.7 million tons within the region, for a total tonnage of 76.4 million.[2] This amounts to about 63 tons for every nonagricultural job in the area.[3]

Comparison with Major Seaports

The Upper Ohio Basin port area surpasses a number of large seaports in tonnage moved, such as Baltimore with 51.4 million tons in 1979, Hampton Roads with 60.0 million, or Philadelphia with 54.9 million.[4]

But, this comparison is not complete. Most of the freight moving through the deep-water ports is carried by rail and truck between the ports and communities far inland. For this freight, the ports are merely transit facilities. By contrast, most of the freight received by water in the Upper Ohio Basin is utilized directly by the port industries and that shipped is principally riverside production. Ohio Basin coal mining, iron and steel, electric power, and chemicals are examples. For the seaports, only a limited portion of the tonnage represents jobs and production in the port area. But, the tonnage of the ports of the Upper Ohio Basin enters directly into the area's production and employment.

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[1] U. S. Dept. of the Army, Corps of Engineers, Waterborne Commerce of the United States, 1979, Part 2, New Orleans, Louisiana, 1982.

[2] U. S. Dept. of the Army, Corps of Engineers, Op. Cit., Part 5, Section 2.

[3] Nonagricultural employment in the Upper Ohio Basin estimated from 1979 ratios of employment to population in each Upper Ohio Basin state. See: U. S. Dept. of Commerce, Statistical Abstract of the United States, 1980, Washington, D. C., 1981, pages 12 and 412.

[4] Unless otherwise specified, all waterborne tonnages cited herein are as reported by the U. S. Dept. of the Army, Corps of Engineers, Waterborne Commerce of the United States, 1978 and 1979, U. S. Army Engineer District, New Orleans, Louisiana, 1980 and 1982.

Furthermore, most of the seaport tonnages are foreign trade carried mainly in foreign-flag ships, manned by foreign crews, and built in foreign shipyards. But, the tonnages of the Upper Ohio Basin ports are 100 percent domestic, carried exclusively in American vessels manned by American workers, and the industries of shipbuilding, ship repair, and vessel supply are an important sector of the Upper Ohio Basin industrial complex.

Complementary Relationship of River, Rail, and Truck Transportation

River transportation is complementary to efficient railroad and highway carriage, each essential to the industrial strength of the region. The rivers carry large-volume movements at incomparably low cost, usually (but not always) in bulk form--commodities which do not require high speed movement or precise delivery schedules. In 1979, the average truckload in common carrier service was 13.6 tons.[1] The average rail carload was 64.1 tons.[2] But, the smallest standard bargeload on the Monongahela River is 925 tons, and, on the Ohio, the average well exceeds 1,200 tons.

As for cost, in 1979, the average railroad charge per ton-mile (one ton carried one mile) was 2.6 cents.[3] The average charge of the ICC-regulated barge lines on the Mississippi River and its tributaries (including the Ohio) was only 0.8 of a cent, a little less than one-third as much.[4]

This does not mean that the railroads and trucks are inefficient. They provide a type of service and carry a mix of commodities largely different from that of the waterways. But, for large-tonnage movements of such cargoes as coal, gasoline, fuel oil, finished steel, bulk chemicals, and bulk building materials, the rivers are the foundation of low cost for the basic industries of the Upper Ohio Basin.

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[1] American Trucking Association, Inc., American Trucking Trends, 1979-1980, Washington, D. C., 1981, page 64.

[2] Association of American Railroads, Yearbook of Railroad Facts, 1981 Edition, Washington, D. C., 1981, page 40.

[3] *Ibid.*, page 33.

[4] Interstate Commerce Commission, Washington, D. C., 1981.

Deterioration and Obsolescence of the Navigation System

The waterway transport foundation is eroding. Since the mid-1950's, 16 new lockage installations of modern dimensions have been constructed on the Ohio River. These are serving well in moving essential products and fuels between the Upper Ohio Basin and distant interior and Gulf Coast centers. But serious choke points remain. The antiquated locks at Gallipolis, Ohio, opened to traffic in 1937, are imposing ever-growing delays on freight movements critical to the community. Modernization is long overdue. Furthermore, three additional outmoded lockage structures farther upstream on the Ohio are due for modernization in the early future.[1] Similarly, on the Monongahela and the Kanawha, a number of existing works, some completed as long ago as 1925, are reaching retirement age. Most of these locks, well suited to the steam vessels of an earlier day, are too small for modern navigation. Most are subject to deterioration, and down times for repair become more frequent and prolonged.

The Long Lead Time for Effective Action

If the water transportation base of the Upper Ohio Basin economy is to be brought into phase with the requirements of the industries it serves, action must be taken promptly. Lead times are long. The period for planning and construction of a typical improvement project falls in the range of five to ten years. Studies looking towards modernization at Gallipolis were begun in the mid-1960's. But, public inattention and bureaucratic stalling delayed authorization even of initial planning until 1976. Such planning is now under way. But, construction has not yet been authorized and, under highly optimistic assumptions, the new Gallipolis works cannot possibly be brought into service before 1989. By that time, a major traffic crisis at the site will be imposing costs on the communities of the upper basin amounting into the hundreds of millions of dollars per year. If a similar crisis, deferred a few years but multiplied several-fold, is to be averted at the locks farther upstream on the Ohio and on the Monongahela and the

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[1] These three and their respective mileages downstream from Pittsburgh are Emsworth, 6.2 miles; Dashields, 13.3 miles; and Montgomery Island, 31.7 miles. All three are in the State of Pennsylvania.

Kanawha, preliminary studies now under way should be expedited and converted promptly into action.

Other Port Programs in Process

Other port areas are moving forward. A new installation at Mississippi River Locks No. 26 on the doorstep of St.Louis is under construction at an estimated cost of $542 million (in 1979 dollars). Plans are advancing for improvements at the Port of Baltimore at a cost of $110 million, at Mobile of $392 million, and in the area of Baton Rouge and New Orleans of $410 million. These programs are being pressed for "fast tracking", that is, for minimizing bureaucratic delays and for prompt construction.

Perspectives for the 21st Century

The vistas of the 21st Century are coming into view. A chemicals industry advancing rapidly into new processes and products with new findings from the laboratories, the coming development of large-volume commercial production of coal-based liquid and gaseous fuels, and the outlook for a continuing increase in exports of coal are among these. The steps now being taken towards heightened efficiency of the railroad system and improved maintenance of highways are in harmony with these prospects. If the year 2000 is to find the Upper Ohio Basin industrial complex participating in full measure, action towards modernization of the waterways must move forward in pace with the emerging demands of the future.

2. WATERWAY MODERNIZATION AND THE CHEMICALS INDUSTRY OF THE UPPER OHIO BASIN

The chemicals industry of the Upper Ohio Basin is critically important to the region and to the national economy. It is also a major transporter by water and deeply dependent on a modernized navigation system of adequate capacity.

Employment and Incomes in the Chemicals Industry

In 1977, the chemicals industry in the Charleston, West Virginia, area employed about 8,600 people; in the Pittsburgh area about 6,200; and in the

Parkersburg-Marietta area some 4,500. The bi-state areas of Wheeling, Steubenville-Weirton, and Huntington-Ashland are also substantial centers of chemicals operations. Altogether, the total employment of the chemicals industry in the Upper Ohio Basin in 1977 numbered approximately 23,200 persons whose salary and wage incomes aggregated about $391.5 million.[1]

The industry is also a big purchaser of supplies, services, fuels, and electric energy. These purchases are mainly local or within the region. In 1977, excluding raw materials, the chemicals industry of the Upper Ohio Basin disbursed over $1.1 billion in this manner. Adding payrolls, the total regional incomes derived directly from chemicals amounted to something approaching $1.5 billion. This figure would be substantially higher today.

Aggregate regional benefits are even greater. Economists universally identify a process called the "multiplier". Simply stated, this means that every person who gets his or her income from a particular industry such as chemicals spends most of it in the local retail stores and in the purchase locally of professional and other services. Obviously this spending constitutes income for the personnel engaged in these diverse activities. It should also be noted that the higher incomes of all these groups enhance the state and local tax base and thereby contribute to such public services as schools, street maintenance, and police and fire protection.

The amount of the multiplier varies, but its local impact is variously estimated at 1.6 to 2.0. Taking the lower of these figures, the total incomes generated in the Upper Ohio Basin by the chemicals industry amounted in 1977 to something like $2.4 billion. At 1982 prices, this would amount to over $3.7 billion.

Whether a carpenter or a cook, a doctor or a druggist, a teacher or a tailor, many a citizen of the Upper Ohio Basin, who takes little note of the neighboring chemicals works, nevertheless pockets money originating in that industry as his daily earnings.

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[1] Data herein on employment, payrolls, purchases, and value of shipments are as reported by the U. S. Dept. of Commerce, Bureau of the Census, 1972 and 1977 Census of Manufactures and 1978 Survey of Manufactures, Washington, D. C., respective years.

The Chemicals Industry of West Virginia

In the Pittsburgh area, of course, the chemicals industry is somewhat overshadowed by such giants as steel. But downstream in eastern Ohio and West Virginia, chemicals are the giant. Of the incomes generated directly by all manufacturing industries in the State of West Virginia in 1978, chemicals accounted for 30.8 percent, a total of $1.4 billion. Local respending, conservatively estimated, expanded this into an income of some $2.24 billion derived directly and indirectly in West Virginia from the operations of this one industry. This amounted to $1,167 for every man, woman, and child in the state.[1]

Chemicals are a high-technolgy industry, and skill standards are above average. In 1978, the year's earnings in West Virginia chemicals averaged $18,531 per worker; in all other manufacturing industries in the state, only $14,830. The higher incomes of the people associated with chemicals production are reflected in higher standards of housing, education, and civic and cultural interests. These enhance the quality of community life. Indeed, during the 1970's these incomes rose faster than those in the chemicals industry elsewhere in the country. From 1972 to 1977, the annual earnings of the average chemicals worker in the Upper Ohio Basin increased by $6,121. In the chemicals industry nationwide, the corresponding increase was only $5,328. The chemicals industry is clearly one of the main pillars of the region's economy.

Waterway Logistics of the Chemicals Industry

In the Upper Ohio Basin, the processing of chemicals is distinctly a water-based operation. The industry originally developed in this region on the strength of its mineral resources, particularly of brines and coal. But time brought changes, and over many years the industry came to be increasingly dependent on the growing volume of petrochemicals produced by oil refineries, both on the Gulf Coast and in the lower Ohio and Mississippi Valleys.

Fortunately, the early canalization of the Ohio River and its major tributaries and the improvements of the Ohio River System after World War II greatly improved the region's low-cost waterway access to these distant sources. Thus, it has emerged that the critical regional resource now sustaining the vitality of the Upper Ohio Basin chemicals industry has shifted substantially from the local salt deposits to the area's navigation system.

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[1] The U. S. Dept. of Commerce, Statistical Abstract of the United States, 1981, reports West Virginia's population in 1978 as 1,920,000 persons, Washington, D. C., 1982, page 9.

As an indicator of the waterways' role, in 1977, the sales of chemicals from the Upper Ohio Basin were about 3.3 percent of the national total. But, of all the chemicals moved throughout the country on the U. S. inland waterways, the Upper Ohio Basin shipped and received 14.7 percent. It seems clear that the future position of the region's chemicals industry in national and world markets will be strongly influenced by the efficiency and adequacy of the inland navigation system which sets it apart from competitive regions of the country.

Navigation Structures and Water Supply

The navigation system also enhances other resources which underlie the strength of the basin's chemicals industry. One of these is the abundance of fresh water of which chemicals are large-volume users. For example, to produce one ton of rayon fiber, 200,000 gallons of water are used. For each gallon of alcohol, 236 gallons of water are used, and for each ton of synthetic rubber, 660,000 gallons. This water is not consumed, but, after use and quality restoration, it is returned to the streams and thereby made available for reuse by other industries and by municipalities. This process of water withdrawal, purification, and discharge is characteristic of all major Ohio Valley industries, including steel, electric energy, oil refining, and others. These industries are massive users of water, but small consumers.

By maintaining high and stable water levels, the navigation dams on the Ohio River and its tributaries are an important feature of the water supply. Within each year the natural flow of water in the rivers varies greatly from season to season. For example, at Parkersburg, West Virginia, the maximum recorded flow in the Ohio River is 192 times as much as the minimum. At

Charleston on the Kanawha, the maximum is 210 times the minimum.[1] Prior to construction of the navigation dams, during the annual low water season, usually in the late summer and fall, one could sometimes wade across the Ohio River. Obviously, in such circumstances, the water intakes of municipalities and industries would be well above the water level and the semi-stagnant waters almost unusable. The navigation dams maintain a water level sufficiently high to avert this predicament. Meanwhile, releases from upstream reservoirs above the head of navigation maintain the waters' flow and enhance their quality.

Navigation and Electric Energy

A second resource reinforced by navigation is the abundance of low-cost electricity. The chemicals industry is distinctive in its very large requirements of electric energy. In 1980, the average fuel cost for U. S. electric utilities was $1.90 per million Btu's. By contrast, for four major electric utilities in the Upper Ohio Basin, it was only $1.45.[2] The fuel consumed by Ohio Basin utilities is almost entirely coal, most of it received at low cost by river barges. In addition, a number of the navigation dams have hydroelectric potential, now being developed. Thus, the navigation system combines with the region's abundance of coal to provide electricity at low cost to the basin industries and consumers.

Chemicals and Steel

It may be noted that the chemicals industry contributes to the competitive position of the region's steel industry. The steel industry is a large-scale consumer of certain chemicals, such as sulphuric acid and oxygen. Major chemicals companies also supply the steel industry with furnace linings and with electro-metallurgical products. In addition, the steel industry's coke ovens produce chemical by-products, including nitrogen compounds and light oils. Chemicals processing in the Upper Ohio Basin sustains an area market for these products.

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[1] U. S. Dept. of the Army, Corps of Engineers, Ohio River Division, Ohio River Basin Comprehensive Survey, Appendix C, "Hydrology", Cincinnati, Ohio, 1966, Table 9.

[2] U. S. Dept. of Energy, Energy Information Administration, Cost & Quality of Fuels for Electric Utility Plants, 1980 Annual, Washington, D. C., 1981, pages 3, 139, and 151. The four utilities are the Duquesne Light Co., the Appalachian Power Co., the Monongahela Power Co., and the Ohio Power Co.

The Linkage Between Waterways, Railroads, and Highways

The major logistical flow of chemicals consists of large volumes of waterborne feedstocks and intermediates moved from the Gulf Coast and the lower river valley refineries into the Upper Ohio Basin. They include such bulk chemicals as liquid sulphur, alcohols, sulphuric acid, benzene, toluene, xylene, and numerous others. On receipt in the Upper Ohio Basin, these feedstocks are converted into innumerable finished products.

The products of chemicals are probably the most varied of any industry on earth. They are incorporated into non-durable goods, including medicines, food and drug wrappings and containers, preservatives, and weed and insect killers for lawns and farms. Chemical fibers are the mainstay of the textile industry. Chemical products keep people and properties presentable and clean with soap, cosmetics, household cleansers, paints, and varnishes. The needs of comfort and safety enlist chemicals in such dissimilar products as cushions, electrical insulation, and automobile tires. Durable goods share this dependence. Chemical products are built into automobiles, machinery, appliances, boats, and building materials of wide variety, from kitchen floors to roofings. Highly technical processes in the production of petroleum products, glass, paper, steel, aluminum, and others rely on chemicals. This listing is merely indicative. Out of 85 listed industries in the Standard Industrial Classification, 50 are substantial users of chemicals.[1]

These highly diverse consumer and industrial markets, of course, are concentrated in the country's principal centers of population and industry. For the Upper Ohio Basin, this means the entire Northeast Quadrant of the United States, from New England to the Mississippi. Some markets are nationwide, as in the case of agricultural chemicals. Shipments are mainly by rail and truck for high speed of delivery in relatively small lots. A substantial volume, however, is also shipped from the region by water.

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[1] U. S. Dept. of Commerce, "The Use of Commodities by Industries", Survey of Current Business, February, 1979, pages 46-51.

For the most part, it may thus be said that the chemicals industry of the Upper Ohio Basin is a linkage between the large volume of feedstocks delivered northbound via the rivers, on the one hand, and, on the other, the distribution of products throughout the Northeast, mainly by rail and truck. Much of the industry's future thus depends on a highly efficient transportation system by these three interlinked modes. The development of the Appalachian economy has been greatly strengthened by the modernized highway system. Certain of the region's railroads, such as the CSX System and the Norfolk Southern, are noted for their efficiency, and Conrail service is on a rising course. But, the vital question of a modernized waterway system remains to be answered.

Magnitude and Importance of Waterway Cargoes

Low-cost receipt of feedstocks is critical to the industry's health. The U. S. Census of Manufactures reports that the cost of the industry's inbound materials in 1977 amounted to 58.0 percent of the value of sales. As a measure of the importance of waterway transportation, in 1979, the Upper Ohio Basin chemicals industry shipped and received by water 234 tons of materials and products for each worker employed, a total of 5.5 million tons. Of the waterborne receipts, 52.1 percent came from the Gulf Coast.

Cargo Spills and Safety

Much concern has been expressed with regard to spills in the waterways, particularly of toxic or non-removable substances. Clearly, this problem seriously affects human safety, and the transportation of chemicals is involved. We have seen, however, the essential and diverse nature of the industry's products and their critical bearing on the nation's food supply, health, and a flourishing economy. Chemicals, therefore, must be transported by one mode or another, if not by water, then by rail, truck, or pipeline. Railroad carriage is the usual alternative. As between these two, waterway transportation is markedly the safer.

A comprehensive study of the relationship of waterway spills to human safety was prepared by Arthur D. Little, Inc., and reported in the Environmental Impact Statement of the U. S. Army Corps of Engineers relative to the replacement of Locks-and-Dam No. 26 on the Mississippi River.[1] The ADL report covers movements of ten hazardous commodities by water, rail, and truck and concludes as follows:

> "For this relative safety analysis, rail movements are found to be the most hazardous, in regard to human exposure index, with little difference in the safety of barges and trucks . . . Expected property damage is about equally low for the barge and truck modes and somewhat higher for rail."

The ADL findings as to human risk exposure appear in Table I on the following page.

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[1] U. S. Army Engineer District, St. Louis, Missouri, Revised Draft Supplement Environmental Statement, Volume 1, (Text, Sections One Through Eight and Section Ten), St. Louis, Missouri, January, 1976, page 6-100 et seq.

TABLE I.

SUMMARY OF RISKS TO PEOPLE
IN TERMS OF ANNUAL EXPECTED NUMBER OF PEOPLE EXPOSED TO SPILL
IF EACH CHEMICAL WERE SHIPPED ENTIRELY BY ONE MODE

(Ten Case Studies)

	Expected Number of People Exposed*			
	Urban		Rural	
	Barge	Rail	Barge	Rail
Styrene	.028	.720	.008	.140
Acrylonitrile	.008	.160	.004	.016
Sulphuric Acid	0	.003	0	.003
Liquid Chlorine	.280	.490	.120	.130
Caustic Soda	0	.038	0	.003
Benzene	.012	.048	0	0
Methanol	.060	.600	.010	.120
Ethylene Glycol	0	.006	0	.004
Liquid Ammonia	.017	.120	.004	.040
Sugar	0	0	0	0

*The decimal values for "expected number of people exposed" result from the infrequency of a spill on any one point-to-point movement of one commodity. If, for example, a spill may be expected to occur only once every 25 years on one movement of one commodity, the number of persons exposed per year would be only a fraction of one.

SOURCE: U. S. Army Engineer District, St. Louis, Missouri, Revised Draft Supplement Environmental Statement, Volume 1 (Text, Sections One Through Eight and Section Ten), St. Louis, Missouri, January, 1976, page 6-112.

The ADL findings for property damage are similar. For example, for acrylonitrile the annual urban damage by barge (allowing for infrequency) is reported at $130; by rail at $2,400. For styrene, the annual urban damage from barge spills is reported at $450; for rail spills at $11,000. For spills in rural areas, the differential property damages favorable to barging are correspondingly large.

In comparison with rail transportation as the most usual feasible alternative, it is evident that, for any given tonnage to be transported, shallow-draft waterway carriage represents a saving of life and an avoidance of human suffering and property loss of high value.

Modernization of the Multi-Modal Transportation System

The three pillars of transportation sustaining the vitality of the Upper Ohio Basin chemicals industry, as we have seen, are the railroads, highways, and waterways linking the industry with its distant sources of essential materials and providing efficient outlets to markets. The Appalachian economy has been greatly strengthened by a modernized highway system. The region's leading railroads, such as the CSX System and the Norfolk Southern, have long been noted for their enterprise and efficiency, and Conrail service is on a rising projection. Neglect of the waterways, however, continues to cloud the future of the industry.

Mounting Congestion Delays

Congestion at the Gallipolis locks on the Ohio is an immediate problem. In 1979, the average congestion delay per tow transited at Gallipolis had risen to 8.0 hours. Similar difficulties are emerging at the three upstream structures near Pittsburgh and at the Winfield locks on the Kanawha. In the absence of modernization, projected average delay times per tow transit at the respective locks are as shown in Table II.

TABLE II.

PROJECTED AVERAGE HOURS OF DELAY PER TOW TRANSIT AT RESPECTIVE LOCKAGE INSTALLATIONS ON THE OHIO AND KANAWHA RIVERS

(Number of Hours of Average Delay per Tow Transit)

	Ohio River				Kanawha River
Year	Gallipolis	Emsworth	Dashields	Montgomery Is.	Winfield
1979	8.0*	n. r.	n. r.	n. r.	n. r.
1990	32.0	4.1	2.3	1.0	4.7
2000	38.4	4.4	2.5	1.0	8.1

*Actual 1979 average delay.

SOURCE: U. S. Dept. of the Army, Corps of Engineers, Huntington, West Virginia, District, Gallipolis Locks and Dam Replacement, Ohio River, General Design Memorandum, Huntington, West Virginia, February, 1981, Appendix O, pages O-27 and O-36.

The cost of the delays projected in Table II would be a severe penalty on chemicals shipments. From the Gulf Coast up the Mississippi and Ohio Rivers to Gallipolis lie 1,674 miles of modernized waterways. Gallipolis, lying just downstream from the mouth of the Kanawha, is the congested gateway between this system and the Upper Ohio Basin. Because of the long lead times for construction, relief cannot be expected before the late 1980's. As will be noted from Table II, if continued procrastination prolongs this congestion, the average loss of time in 1990, both at Gallipolis and at Winfield on the Kanawha, will represent a total of 36.7 hours of delay for each receipt by the chemicals industry of the Charleston area.

The Impact of Congestion on Transportation Costs

Delay of this magnitude will impact both on the industry's transportation costs and on its inventory charges. Waterway carriers report a 1982 delay cost at about $400 per hour per tow, and a 36.7-hour delay would thus aggregate nearly $15,000 for each transit of upbound chemicals. The upbound movements via Gallipolis are several-fold those downbound, so that the cost of returning empty barges would be incurred. Thus, the total cost for a single towload received would amount to $30,000, an unmitigated waste of labor, fuel, supplies, and overhead charged to the chemicals industry.

Similar observations may be made with respect to the chemicals industry of the Pittsburgh area, and of Wheeling, Parkersburg, Marietta, Steubenville, and Weirton. Action must be taken to modernize the three upstream installations within Pennsylvania in the early future. As shown in Table II, the 1990 delays of these three, in addition to Gallipolis, are projected at a total of 39.4 hours. The depressive impact on all the water-based industries of the region - steel, coal, petroleum products, electric energy, and building materials, among others - will be fully shared by the chemicals industry.

The Impact of Congestion on Inventory Costs

In addition to the soaring and wasteful increase in transportation charges, the chemicals industry is particularly vulnerable to high inventory costs. Noting, for example, the projected 1990 average delay of 36.7 hours affecting the Charleston area, this average represents wide variations in actual time loss.

With the aging of the existing locks, down times for repairs become more frequent and prolonged. The consequent lengthening of delays is evident from the experience of 1981. From September 26 to October 4, a period of eight days, the main lock at Gallipolis was closed for repairs. Only the smaller auxiliary remained in service. In the limited dimensions of the auxiliary chamber, the individual tow of barges commonly spent approximately half a day in the process of multiple-locking. This compares with a normal 30-minute lockage in modern locks of adequate dimensions. Less than 12 hours after the closure of the main chamber, at least 15 tows were awaiting access to the auxiliary. Maximum delay soared to 89 hours. This occurred in 1981 when average delays at Gallipolis were comparable to the 1979 8-hour average. From this, the prospects for 1990 may be inferred. In that year, the average at Gallipolis is projected at 32.0 hours, and the maximum will clearly run well in excess of 100.

With delays occurring unpredictably to such extreme lengths, the highest exceeding 100 hours, the chemicals industry would have to acumulate special inventories to assure continuity of operations and service to customers. These inventories would represent a very large investment. Of 36 chemicals listed in a study of waterway user charges, principally aliphatics and aromatics, 1979 values ranged from $104 to $934 per ton. The median value (ethylbenzene) was $478 per ton.[1] These values are markedly higher than those of other large-volume bulk commodities carried on the inland waterways, such as coal and grains.

The Impact of Congestion on Investment in Vessels

In addition to inventories at the site of processing, the industry's investment in river barges and their cargoes is distintively high. Chemicals ordinarily require high-cost barges of special design. Heavily insulated tank barges made of nickel steel carry anhydrous ammonia at a temperature of 28° below zero F. Heated barges carry molten sulphur at over 280° F. Tank barges for carrying phosphoric acid are lined with one-quarter inch of sheet rubber vulcanized to the steel interior. A fleet of such vessels obviously represents an investment of many millions of dollars.

The cargo investment, of course, is correspondingly high. A single bargeload of benzene, at $410 per ton (1979), represented an investment approximating $500,000.

The costs of idling investments of this magnitude for unpredictable and progressively longer priods constitute a growing and serious handicap on chemicals operations in the Upper Ohio Basin.

The Urgency of Expeditious Action

The importance of modernization and added capacity at Gallipolis was clearly recognized as long ago as the early 1960's. Evaluation studies were authorized in 1962. Since that year, three successive evaluations have been completed - all favorable. The latest, completed in 1981, reports a ratio of public benefits to costs of 12.9 to 1.0. In the twenty years following 1962, all that has happened has been the authorization of engineering and design work. Should the project be put on a fast track, with expeditious progress, the earliest it could be brought to completion would be 1989.

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[1] Data Resources, Inc., Analysis of Issues Relating to the Economic Impact of Inland Waterway User Taxes and Charges, U. S. Dept. of Commerce, National Technical Information Service, Springfield, Virginia, March, 1982, page II-33.

Similar problems are now emerging with respect to the three projects on the Ohio River near Pittsburgh and with respect to the navigation systems of the Monongahela and Kanawha Rivers. Prompt action becomes ever more critical to the water-based industries of the region, and, of these, the chemicals industry is in the front rank. Nationwide, the chemicals industry is evolving rapidly into new forms, new processes, and new products. If the sector of the industry of the Upper Ohio Basin is to retain its position and its present contribution to incomes and jobs in the region, prompt modernization of the navigation system is an urgency of highest priority.

ATTACHMENT (C)

GALLIPOLIS LOCKS & DAM

THE PROBLEMS

On September 11, 1981 - Governors Rockefeller, Rhodes and Thornburgh inspected the Gallipolis Locks and Dam site on the Ohio River and declared replacement of this navigation facility "the number one modernization priority" in the Upper Ohio River Basin.

THERE ARE TWO BASIC PROBLEMS WITH THE PRESENT GALLIPOLIS STRUCTURE:

FIRST- the present lock is located in a river bend making navigation extremely hazardous for tow pilots trying to maneuver today's large tows. Accidents occur at Gallipolis on the average of about 10 times annually. Approximately one-half of all accidents at the nine navigation projects in the Huntington district occur at Gallipolis.

Many of the accidents have had the potential for disastrous consequences. Fifty-three accidents have occurred at Gallipolis since 1976. Complete loss of 'pool' has occurred at Gallipolis when barges became stuck in the dam gates.

LOSS OF POOL NOT ONLY PROHIBITS NAVIGATION; IT CUTS OFF WATER SUPPLIES TO MUNICIPALITIES AND INDUSTRIES, AND ENDANGERS MARINAS, RIVER TERMINALS AND OTHER RECREATIONAL AND INDUSTRIAL STRUCTURES ALONG THE RIVER.

SECONDLY - The present locks are deteriorating and are too small to handle modern commercial traffic demands.

The present locks, constructed in 1937, were sized and designed to accommodate navigation needs of the 1930's, when standard tows consisted of six to ten barges which could be locked in a single operation.

TODAY - 45 years later, standard barge tows have increased to 15 to 20 barges, but the locks' capacities have not increased.

GALLIPOLIS IS NOW THE ONLY OHIO RIVER PROJECT FROM THE PENNSYLVANIA STATE LINE TO THE MOUTH OF THE RIVER WITHOUT A 1200' LOCK CHAMBER - ITS MAIN CHAMBER STILL ONLY HALF THAT SIZE . . .

Governor Thornburgh of Pennsylvania: -
"A chain is no stronger than its weakest link. There is no question that Gallipolis is the weakest link in the Ohio's transportation system. REPLACEMENT OF THE GALLIPOLIS LOCK IS CRUCIAL TO THE NATION'S BEST INTEREST."

Governor Rhodes of Ohio: -
"The bottleneck at Gallipolis is slowing down the movement of coal and other products to market . . . It's also having an adverse effect on jobs and industry . . . OUR PROBLEM IS THAT WE HAVE 22,000 MINERS OUT OF WORK. THE OHIO VALLEY IS A SLEEPING GIANT . . . INDUSTRY WILL COME IN - IF WE FIND A WAY TO EXPEDITE MOVEMENT OF OUR COAL !"

Governor Rockefeller of West Virginia: -
"The OHIO RIVER is the MAIN ARTERY supplying life blood to the nation's most industrialized region. THE GALLIPOLIS LOCKS IS THE BUSIEST ON THE OHIO RIVER. THE INITIAL STUDY FOR REPLACEMENT BEGAN IN 1962. NOW, 19 YEARS LATER, THE GENERAL DESIGN STUDY IS COMPLETED. THIS REGION AND AMERICA CAN NOT WAIT ANOTHER TEN YEARS FOR CONSTRUCTION TO BE COMPLETED AT GALLIPOLIS !

19 STATES DEPEND ON GALLIPOLIS !

THE PROBLEMS AFFECT REGIONAL AND NATIONAL ECONOMIES !

WHO USES AND DEPENDS ON GALLIPOLIS LOCKS & DAM?

The scenario for coal production in the Upper Ohio River Basin is predicted to be vibrant growth throughout the rest of this century. **A major impediment to this growth is the obsolescent inland navigation infrastructure; specifically THE GALLIPOLIS LOCKS AND DAM, which must be modernized if efficient and economic movement of coal is to be achieved.**

Of all coal mined in the Upper Ohio River Basin (Southeastern Ohio, Western Pennsylvania and Northern West Virginia) (except locally consumed coal) 52.5 percent of **ALL** coal is moved by **WATER.**

IN 1979 - There were 31,450 Upper Ohio River Basin coal miners producing coal for waterborne movement, about 23 million tons of coal moved through Gallipolis.

BY 1990 (8 years from now) there will be 47,000 coal miners producing coal that will be moved by water.

By the year 2000 - 77,000 coal miners will produce coal for waterborne movement throughout this coal-producing region of the nation.

Coal transported by water provided payroll in 1979 totaling $551.1 million. The same coal production payrolls by 1990 are projected at $835.5 million. By the year 2000 - the payroll projected is expected to be $1.375 billion.

Purchases of services and other materials related to waterborne coal in 1979 was $1.140 billion - much within the Upper Ohio River Basin. The same expenditures in 1990 are projected to be $1.716 billion. By the year 2000 - the projected expenditures will be $2.825 billion.

The value of coal shipped on the Upper Ohio River Basin System in 1979 was $2.038 billion. Projected coal tonnage in 1990 represents a value of $3.067 billion; by the year 2000 - $5.050 billion (These figures are all in 1979 dollars, and do not assume inflation increases after 1979).

Much of this coal will be consumed in the electric power industry and the steel industry within the region. The chemical industries will be consuming more coal and less oil in the next two decades.

There will be incrementally increasing volumes of coal mined in the Upper Ohio River Basin that will move **DOWNSTREAM** into the lower Ohio Basin and to the Gulf, **ALL THROUGH THE GALLIPOLIS LOCKS.** (Assuming prompt enlargement of the Gallipolis facility).

Projections of total coal tonnage movement in 1990 in this region are 100.5 million tons; in the year 2000 - 165.5 million tons. Much of this coal will move intrabasin.

Projections of coal tonnage THROUGH GALLIPOLIS in 1990 are 36 million tons. By the year 2000 - 42.426 million tons of coal will move THROUGH THE GALLIPOLIS LOCKS.

About 65 percent of ALL tonnage THROUGH THE GALLIPOLIS LOCKS IN 1990 WILL BE COAL.

- Among the perspectives of the 21st century is an American steel industry revitalized by new technologies and a massive new investment of private capital - an industry restored to its former competitive position in world markets.
- In the Upper Ohio River Basin, SERVED BY GALLIPOLIS LOCKS, the vitality of the steel industry rests directly upon the large-scale assembly of bulk materials and fuel, and, in association with efficient rail and highwway transportation, on the distribution of its products by WATER.
- IN 1980 - The Upper Ohio River Basin produced 17.5 percent of the nation's output of RAW STEEL. It employed directly 108,000 people contributing $3.24 BILLION of direct steel industry incomes.
- THE STEEL INDUSTRY in the UPPER OHIO RIVER BASIN expended some $5.46 BILLION in equipment servicing and maintenance, electric energy, fluxing stone, rail and trucking services, lubricants, chemicals, among other purchases, a goodly part within the Upper Ohio Basin.
- **IN 1978 - This same area shipped DOWNSTREAM THROUGH GALLIPOLIS a total of 1.7 million tons of steel products with a mill value of about $964.8 million. This steel represented production of about 11,500 steel industry workers and a value in income of over $375 million.**

- IN 1978 - Over 30 percent of all pipe and tubing produced in this area of the nation went to market via the rivers - four-fifths of it - ALL THE WAY TO THE GULF COAST

THROUGH THE ANTIQUATED AND OUT-MODED LOCKS AT GALLIPOLIS.

- **Coal consumption by the steel industry approximated 12 million tons; providing jobs for about 4,300 Ohio Basin coal miners and other employees !**
- To utilize its capacity and maintain employment, the Upper Ohio River Basin must ship longer distances to penetrate markets closer to competitive origins. **Upper Ohio River Basin steel must again make its way through the deteriorated locks on the Monongahela and the Upper Ohio and THROUGH THE MOUNTING CONGESTION OF THE LOCKS AT GALLIPOLIS.**

KEYSTONE STRUCTURE IN AMERICA'S INDUSTRIAL HEARTLAND FOR COAL, STEEL, CHEMICALS, AND JOBS!

The original system of locks and dams in the Ohio River Basin was designed and constructed as integral parts of America's inland waterways system. With ever increasing demands of modern traffic, those original lock facilities are required to handle tonnage volumes they were not designed to accommodate.

GALLIPOLIS TRAFFIC BY STATE - 1976
(K - TONS)

State	Tonnage Originating (%)	Tonnage Received (%)
Alabama	93.8 (0.3)	109.8 (0.3)
Arkansas	121.5 (0.3)	8.2 ——
Florida	1.4	2.4 ——
Illinois	2,546.4 (7.0)	323.8 (0.9)
Indiana	1,502.6 (4.1)	193.8 (0.5)
Iowa	114.0 (0.3)	23.5 (0.1)
Kansas	4.2 ——	—— ——
Kentucky	9,109.6 (25.0)	465.5 (1.3)
Louisiana	4,767.9 (13.1)	541.2 (1.5)
Minnesota	11.1 ——	29.6 (0.1)
Mississippi	29.2 (0.1)	23.4 (0.1)
Missouri	299.2 (0.8)	188.0 (0.5)
Nebraska	—— ——	4.7 ——
Ohio	7,848.9 (21.6)	13,007.8 (35.8)
Oklahoma	78.4 (0.2)	52.2 (0.1)
Pennsylvania	1,707.1 (4.7)	10,051.6 (27.6)
Tennessee	156.0 (0.4)	772.7 (2.1)
Texas	2,293.6 (6.3)	472.6 (1.3)
West Virginia	5,240.4 (14.4)	9,891.0 (27.2)
Other	549.5 (1.5)	212.9 (0.6)
	36,374.9 (100.0)	36,374.9 (100.0)

SOURCE.
Waterborne Commerce Statistical Center
Planning Division, Huntington District
U. S. Army Corps of Engineers

The GALLIPOLIS LOCKS AND DAM is the most obsolescent and overburdened facility in the Ohio River system.

In 1976 - 11.4 million tons of Chemical products moved on the Ohio River System. 3.1 million tons (or 27.2 percent) of all chemicals moved through the Ohio River System traversed through the Gallipolis locks.

An analysis of typical demands placed on Gallipolis by the Chemical Industry provides a perspective of the problems and demands on this single, most important need in the entire Ohio River system.

CHEMICAL COMMERCE THROUGH GALLIPOLIS

A major chemical company moves low sulphur coal from Kentucky UPSTREAM THROUGH GALLIPOLIS LOCKS to its chemical plant in New Martinsville, West Virginia. The coal generates power for the chemical plant to produce caustic soda and chlorine.. The caustic soda produced by the company moves BACK DOWNSTREAM THROUGH GALLIPOLIS to the pulp and paper industries in South Carolina, West Virginia, North Carolina, Maryland and Georgia.

This chemical firm moves chlorine produced at its New Martinsville plant BACK DOWN THROUGH GALLIPOLIS LOCKS for use by southern chemical companies in manufacturing paint and rubber products. America's food and beverage industry uses an end product of this chemical company (caustic soda) to wash bottles, dishes and commercial containers, including, the beer and soft drink bottles used daily by millions of Americans.

Another major chemical company moves aniline, toluene and benzene from Louisianna, Texas, Kentucky and Ohio UP THROUGH THE GALLIPOLIS LOCKS to its West Virginia plant. From these raw materials this chemical company produces muriatic acid which is, then, shipped BACK DOWN THROUGH GALLIPOLIS LOCKS for use by southern and midwestern steel companies in processing ('pickling') steel.

This chemical company's products (which must move UP and DOWN THROUGH GALLIPOLIS) include polyurethane chemical products which are distributed nationally to industries which manufacture home furnishings, transportation products for use by the automobile and aircraft industries - materials for seat covers; insulation for homes and refrigerators. . . .

Still another major chemical company (in West Virginia) moves organic chemicals from Texas and Louisianna UP THROUGH THE GALLIPOLIS LOCKS to Charleston, West Virginia where the organic chemicals are converted into a variety of consumer products: insecticides and resins for use in American-made automobiles - materials for auto dashboards.

After this major chemical producer processes chemicals in Charleston, W. Va., it moves refined chemical products BACK DOWN THROUGH GALLIPOLIS LOCKS - by water - the most cost effective means - all the way to Chicago where the chemical company distributes the final product - anti-freeze for use by millions of Americans . . . . .

THE ECONOMY OF AMERICA'S INDUSTRIAL HEARTLAND SLOWS DOWN AT GALLIPOLIS!

GALLIPOLIS PASSES MORE TRAFFIC, TONNAGE AND BARGES, THAN ANY PROJECT UPSTREAM OF LOUISVILLE, KENTUCKY, AND PERFORMS MORE LOCKAGE CYCLES THAN ANY OTHER LOCKS ON THE ENTIRE OHIO RIVER . . .

- Because of the hazardous conditions for pilots attempting to navigate downstream into the Gallipolis locks, barges ramming into the lock gates is a constant problem - resulting in excessive maintenance and operations at Gallipolis.
- BECAUSE OF SUCH DAMAGE TO THE GALLIPOLIS LOCK GATES, THE LOCK GATES WILL NOT SEAT PROPERLY AND LEAK EXCESSIVELY.
- Problems of locking through Gallipolis are increased during periods of high water and icy conditions.
- 80 PERCENT OF GALLIPOLIS ACCIDENTS OCCUR DURING LOCKING OPERATIONS.
- DAMAGE CAUSED BY INCREASING TOW SIZES AND THE HAZARDOUS GALLIPOLIS APPROACH NOW OCCURS AT GALLIPOLIS ON THE AVERAGE OF ABOUT 10 TIMES ANNUALLY.

GALLIPOLIS HAD MORE THAN 10,000 LOCKAGES IN 1976, COMPARED TO ONLY ABOUT 5,000 AT OTHER OHIO RIVER PROJECTS.

AS GALLIPOLIS TRAFFIC INCREASES—SO DOES DELAY TIME!

- IN 1976 - AVERAGE DELAY TIME FROM ARRIVAL TO START OF LOCKAGE AT GALLIPOLIS WAS - ABOUT THREE HOURS . . . . .
- IN 1978 - DELAY TIME AVERAGED AN HOUR AT THE NEWER LOCKS BUT WAS OVER FIVE HOURS AT GALLIPOLIS . .
- BY 1990 (eight years from now) – when 65 million tons will be handled annually at Gallipolis, A 32 HOUR DELAY WILL RESULT - NEARLY A DAY AND A HALF TO GET THROUGH ONE LOCK !

AS DELAY TIME INCREASES—SO DO COSTS FOR ALL CONCERNED!

IN 1979 - Congestion delays at Gallipolis averaged 8.6 hours per tow transit at a cost to carriers, shippers and receivers estimated to exceed $3,400 for an average one-way movement, and $6,800, including the return of unloaded barges through the Gallipolis locks.

FUTURE PROJECTIONS INDICATE THAT TRAFFIC AT GALLIPOLIS WILL INCREASE BY AS MUCH AS 60 PERCENT BY 1990 !

PROJECTED TRAFFIC DEMANDS TO BE PLACED ON THE GALLIPOLIS FACILITY BY 1990 WILL EXCEED THE ABSOLUTE PRESENT PHYSICAL CAPACITY OF THE PRESENT LOCKS AT GALLIPOLIS.

ANYTHING SHORT OF IMMEDIATE ACTION WILL FORESHADOW A MAJOR TRAFFIC CRISIS AT GALLIPOLIS BY THE END OF THE 1980's !

A total of 19 states move their raw materials and finished products THROUGH THE GALLIPOLIS OUT-MODED FACILITY which is located halfway between the highly industrialized Pittsburgh area and the Mississippi River.

TRAFFIC UPSTREAM AND DOWNSTREAM THROUGH GALLIPOLIS INCREASES ANNUALLY !

IN 1976 - Nearly 41 million tons of commodity traffic passed through the GALLIPOLIS LOCKS. More than 50 percent, or 22.1 million tons, was coal and coke.

BY 1990 (8 years from now) - more than 65 million tons of bulk commodities will traverse the Gallipolis Locks. Of this - 36 million tons, a 63 PERCENT INCREASE OF COAL, will move to increased regional and national markets, and for OVERSEAS EXPORT.

The most important users of the GALLIPOLIS LOCKS are the states of OHIO, WEST VIRGINIA, PENNSYLVANIA and KENTUCKY. About 65 percent of the Gallipolis traffic originates in and over 90 percent of the Gallipolis traffic is destined for these four states . . . . . .

AT THE PRESENT TIME - MORE THAN 40 STEAM ELECTRIC GENERATING PLANTS ARE LOCATED ALONG THE MAINSTEM OF THE OHIO RIVER. COAL FOR THESE PLANTS MUST MOVE THROUGH GALLIPOLIS . . . .

SOME 8 to 10 MILLION PEOPLE LIVE AND WORK IN THIS HEAVILY INDUSTRIALIZED AREA.

BECAUSE THE RIVER, SERVED BY GALLIPOLIS LOCKS, PROVIDES LOW COST TRANSPORTATION BETWEEN THE COAL MINES AND THE COAL CONSUMERS, LOCAL POWER STATIONS PAY ABOUT 30% LESS THAN THE NATIONAL AVERAGE PRICE FOR THE COAL THEY CONSUME.

REGIONAL STEEL MILLS PAY ABOUT 15% LESS THAN STEEL MILLS ELSEWHERE FOR COAL THEY CONSUME.

Nearly 20% of the Gallipolis traffic ORIGINATES IN TEXAS and LOUISIANNA. This commerce includes commodities of raw and organic chemicals which are processed and refined by MAJOR CHEMICAL COMPANIES and re-shipped *back through* the Gallipolis Locks for distribution nationally and overseas.

COMMERCE AND MATERIALS MOVING THROUGH GALLIPOLIS DEPEND ON CONNECTING INTERMODAL METHODS OF TRANSPORTATION - TRUCKS AND RAILROAD . . . . .

THE MOST URGENT - SINGLE NEED IN AMERICA'S INLAND WATERWAYS SYSTEM IS THE GALLIPOLIS LOCKS AND DAM WHICH DIRECTLY AFFECTS THE FUTURE COMPETITIVE POSITION OF AMERICA'S INDUSTRIAL HEARTLAND !

THE SOLUTION

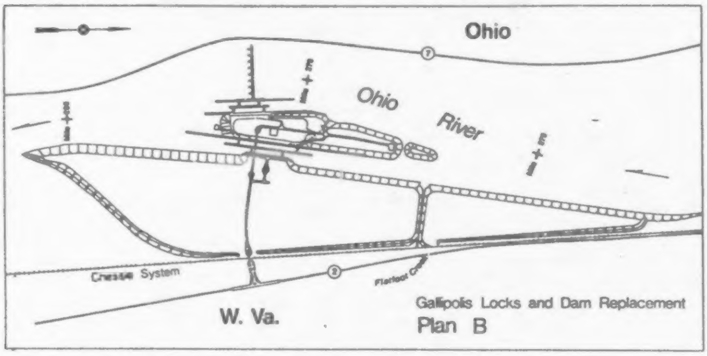
IMPROVEMENT OF THE GALLIPOLIS LOCKS AND DAM IS READY FOR . . .

AUTHORIZATION FOR CONSTRUCTION

GALLIPOLIS MODERNIZATION PLANS HAVE BEEN COMPLETED BY ARMY CORPS OF ENGINEERS !

ENVIRONMENTAL IMPACTS STUDIES HAVE BEEN COMPLETED !

IMPROVEMENTS OF THE GALLIPOLIS LOCKS AND DAM WOULD GENERATE A BENEFIT TO COST RATIO OF 12.9 to 1 . . .



GALLIPOLIS LOCKS AND DAM REPLACEMENT (PLAN 'B')
APPROVED: U. S. ARMY CORPS OF ENGINEERS

"The Board of Engineers for Rivers and Harbors has approved a plan to build two new locks - the main chamber 1200' by 110' wide, and the auxiliary chamber 600' x 110' - and rehabilitate the existing dam."

"ALL PREREQUISITES: studies, planning, preliminary design and environmental impact studies have been completed and satisfied."

"The obsolescence, deterioration, inadequate size and treacherous approach of the Gallipolis Locks and Dam combine to make GALLIPOLIS the single, most urgent project in the entire Ohio River Transportation System."

"Regional and national economies and jobs in nineteen (19) states are adversely affected."

"The problems of the Gallipolis Locks and Dams must be corrected now."

"AUTHORIZATION FOR CONSTRUCTION of the IMPROVED GALLIPOLIS LOCKS AND DAM IS IMPERATIVE IN 1982 !"

James Rhodes, Governor of Ohio
John Y. Brown, Jr., Governor or Kentucky
Dick Thornburgh, Governor of Pennsylvania
Jay Rockefeller, Governor of West Virginia

STATEMENT OF MILES DEAN, DIRECTOR, WEST VIRGINIA'S GOVERNOR'S OFFICE OF ECONOMIC AND COMMUNITY DEVELOPMENT

It is my privilege today to record for the State of West Virginia our wholehearted support of the recommendations for appropriations with respect to Upper Ohio Valley Waterway Projects and Studies presented to the Committee by Mr. Lester Sutton. I am Director of Economic and Community Development for the States of West Virginia and I am a Vice Chairman and member of the Executive Committee and Board of Directors of DINAMO. West Virginia's principle concern in this matter rises from the mounting traffic congestion at the Gallipolis Locks and Dams between West Virginia and Ohio, which is soon to reach crisis proportions.

Prompt action to expand capacity of this project is most urgent. If construction is begun in 1984, then on the most optimistic estimates, the new locks could not be placed in operation earlier than 1990. By that time, according to independent studies prepared for the Corps of Engineers, traffic demand is projected to reach a range of 64-71 million tons, with delay time averaging 32 hours per tow transit. This would mean an economic loss of about $129 million in 1982 dollars in transportation costs alone in the single year 1990, unless the old locks are replaced by that time.

As the Ohio River Division Engineer pointed out in his testimony before this Subcommittee last February, "during the past 5 years tow-delay increased about 24%. We project that by 1990, congestion at Gallipolis would block 15 million tons from passage."

There are no feasible alternatives to provide service from the same origins to the same destinations for such quantities. These volumes if driven from the river, therefore will move to origins and destinations outside the Ohio River Basin. Western coal, for example, could reach Southern markets for domestic use or export. Some of this displaced tonnage will not move at all from American sources, as in the case of Upper Ohio Valley steel displaced by imports. Such a loss of markets would strike a severe blow to West Virginia coal and steel operations already tragically in depressed conditions.

The modernization of the Gallipolis project would contribute substantially to the creation of additional job opportunities in the entire zone of its influence. During the construction of the replacement locks and rehabilitiation of the dam, of the $313 million cost of the project, $88 million or 32% would be paid for labor. The number employed in construction work would average 350 for a construction period of 11 years. Twice that number of new jobs, according to the Corps of Engineers estimates, would be generated in activities resulting from Gallipolis construction, comprising a total averaging 1,050 job opportunities for the 11 year construction period. The zone of influence of this contribution to employment is an area within a 50-60 mile radius of the project site and includes 23 counties in West Virginia, Kentucky and Ohio, where unemployment, according to the latest figures available ranges from 11.7% to 26.9%, or an average of 16.1%.

But this is only a small part of the total employment benefit. When the new Gallipolis Locks are in operation, costs of operation will be substantially reduced. Delivered costs of coal, electric power, petroleum products, chemicals, iron and steel and other vital commodities in the economic range of the industries served will be substantially reduced. Deliveries of supplies can be more dependably scheduled. The economic climate of the region, favorable to capital investments for reindustrialization would be greatly improved. Thus economic growth of the vast area served will be stimulated and employment levels will rise accordingly. But not least in importance, the tax base for provision of essential public services such as jobs, education, police and fire protection will be materially enhanced. All because a vital element of the infrastructure of this region will have been restored to modern standards of efficiency.

Traffic at Locks 7 and 8 on the Monongahela River is growing rapidly, and the deteriorating locks cannot handle the increase. Over half of the traffic passing through Pittsburgh begins or ends its trip on the Monongahela. Most of it, over 85 percent, is coal, mined in West Virginia and destined for electric-generating facilities and dozens of steel and industrial facilities located up and down the Ohio River Valley.

Like the Gallipolis Locks and Dam on the Ohio, the facilities at Locks 7 and 8 are old. In fact, at 55 years old, they are the oldest on the Monongahela River and are rapidly wearing out.

In fact, Lock and Dam #7 and Lock #8 are only half as large as any of the others on the Mon River requiring that most tows be split before entry, resulting in actual lockage times of at least an hour per tow. Delays of one or two hours to enter the locks are normal, and waits of five to six hours are not infrequent. Finally, there is no auxiliary chamber at Locks 7 and 8, so that a shutdown for any reason stops all traffic.

While Gallipolis remains our first priority, it is imperative that Locks 7 and 8 are also replaced in order to ensure the viability of the region's navigation system.

The detailed statement of Mr. Sutton, which has been presented for the record, depicts the consequences of Gallipolis congestion and the coal, steel and chemical industries of West Virginia and the Upper Ohio Valley. We have underscored the serious consequences for West Virginia's electric energy supply. This threat extends to the Eastern Power Grid. Of the electric energy produced in West Virginia, 71% is exported to other states.

Moreover, the congestion at Gallipolis obstructs the inbound flow of petroleum products which are critical to state's industry and agriculture and to space heating of homes and offices as well as transportation by motor vehicle.

Congestion at Gallipolis likewise obstructs the inbound flow of petroleum products. In 1980, the Gallipolis locks transitted 5,767 barrels of distillate, 2,650,000 barrels of residual fuel oil and 3,180,000 barrels of jet fuel upbound to the valley of the Kanawha and the Upper Ohio River. These fuels are critical to the State's industries and agriculture and to space heating of homes and offices as well as commercial and private transportation.

The coal industry is the greatest loser to Gallipolis congestion. In 1980, coal constituted 62% of the all-commodity tonnage transitted.

The more rapidly growing coal movement is upbound, constituting in 1980 about two-thirds of the total. The coal originates principally in the three states of West Virginia, Ohio and Kentucky, with West Virginia the largest. As a measure of magnitude, the Gallipolis coal transits in 1980 were equivalent to 21.5 percent of total West Virginia shipments by all routings and all modes of transportation.

Adequate capacity at Gallipolis will be of immense value to the mining communities. The projected tonnage increase at stake is from 25.8 million in 1980 to 37.7 million in 1990. Taking average coal value at the mines and mining employment in 1980 in the three originating areas, as reported by the U.S. Department of Energy, the tonnage increase would mean a rise in yearly coal sales of over $810 million at 1980 prices and an increment of about 9,091 mining jobs in the tri-state area. In 1990, based upon projected tonnages, the value, at 1980 prices of the coal of the 3 states transitting Gallipolis would be $1,130,000,000 and would represent jobs for 13,932 miners.

The time to end the debate over Federal responsibility for this project is now. Existing laws and tradition of Federal involvement in the nation's waterway development and control are clearly delineated. It is critical that we move from planning and engineering to construction in order to ensure continued growth and expansion of regional commerce in the eastern U.S.

At this time. we trust that this distinguished subcommittee, continuing its dedication to sound development of the nation's waterway, will recommend a fiscal year 1984 appropriation of $6.4 million to initiate construction of this critically important project, subject of course to authorization. This unusual step would mean that upon authorization this year, funds will be available for FY 1984, which under typical conditions be delayed until 1985, this distinguished subcommittee will, I am confident fully understand the importance of eliminating any unnecessary delay.

I express my sincere appreciation to the Committee for this opportunity to be heard on behalf of these vital matters.

PREPARED STATEMENT

Chairman HATFIELD. Before I call the next witness, I want to include in the record a statement submitted by Lieutenant Governor Shoemaker of Ohio regarding water resource projects of that State.

[The statement follows:]

STATEMENT OF LT. GOV. MYRL H. SHOEMAKER OF OHIO, DIRECTOR, OHIO DEPARTMENT OF NATURAL RESOURCES

Mr. Chairman and members of the subcommittee, I am Myrl H. Shoemaker, Lt.Governor of the State of Ohio and Director of the Ohio Department of Natural Resources.

I am presenting this testimony in support of appropriations for the FY'84 Civil Works Program of the Army Corps of Engineers in Ohio.

As you may be aware Ohio is a water-rich state. We are bounded on the north by Lake Erie and on the south and east by the Ohio River. We also have 185,000 surface acres of inland lakes and 44,000 miles of streams and rivers within our boundaries.

The federal government has worked with us through the Army Corps of Engineers and other agencies in developing our great water resources. Over the years, the Ohio River has been canalized and eight great commercial harbors have been developed along our Lake Erie shore to help foster and promote waterborne commerce. Without question, such commerce has been one of the most significant factors in our state's industrial development.

We have also cooperated with the Corps and other federal agencies in the construction of multi-purpose reservoirs for flood control, water supply, recreation, and fish and wildlife enhancement; local flood protection works; shore erosion measures; emergency bank protection works; and other water projects. These joint efforts have saved lives and property, afforded countless Ohioans increased recreational opportunities and provided both temporary and lasting jobs.

Still the work is far from finished. Although we continue to invest in our own water projects and remain ready to cooperate with the Corps and other federal agencies in the federal water programs in Ohio, we find the federal government reducing its commitment to water development. In FY'82 the federal budget called for an expenditure of over $70 million for Corps of Engineers water projects in Ohio. In FY'83 the expenditure dropped to $54 million and the proposed budget for this year (FY'84) includes only a little over $44 million. The federal budget has been decreasing, despite the need for expenditure of additional funds for extremely important federal projects. Some of the projects where additional funds will be needed are improvements to Cleveland and Lorain Harbors on Lake Erie; the Gallipolis Locks and Dam Renovation project on the Ohio River; the important Ohio Mainstem and the Miami River, Little Miami River and Mill Creek Basins study efforts; flood control projects at North Chillicothe, the Cleveland Metro Zoo, Columbus, Newark, Fairfield, West Carrollton, Nelsonville, Logan, Killbuck and Mansfield; several shore protection measures, and harbors of refuge along Lake Erie.

We realize the Administration has embarked on an effort to sell the Congress and the Governors of our states on the need for increased cost sharing by non-federal interests. We are also aware of the Administration's policy of no new starts without signed commitments of increased expenditures from non-federal sponsors, and of the big push for up-front financing by non-federal interests. We believe these efforts are in direct conflict with the well established responsibilities of the federal government in water resources development. Further, we strongly object to the tactics being used by the Administration in not requesting the minimum necessary funding to operate and maintain completed projects, in reducing the funding for projects actively under construction, and in not requesting funding for projects prepared for construction. This kind of "forced compliance" is bringing our national water development program to its knees and we simply cannot allow it to continue.

I hope we can count on your support in recognizing the needs of the people in the countless communities and rural areas across our land who have been led to believe that they would receive help and that someday their particular water problem would be solved. We need your help in providing the necessary funding to get the job done.

We, in Ohio, are supporting the entire civil works program of the Corps in our state, and request your help in providing funding to match the Corps' full capability in all projects and surveys. There are, however, a few projects which require special attention because they are at such a critical stage of the development process. These projects are listed as follows:

Geneva-On-The-Lake Harbor

In FY'78 the Congress first appropriated funding for post authorization planning for the Geneva project. A total of $862,000 has been appropriated since FY'78 to enable the Corps of Engineers to accomplish advanced engineering and design work. However, before we can seek state funds to assume 50% of the costs of the federal project, we need to be able to provide assurance that the Congress will appropriate the necessary funds to at least allow for a construction start.

The local communities adjacent to the site of the Geneva project, in particular, recognize the importance of the project as an economic stimulus to the area. Ashtabula County, where the project is to be built, has the distinction of carrying one of the highest unemployment percentage rates in the State of Ohio. In 1982 the average unemployment rate for Ashtabula County was 18.6% of the labor force. The January 1983 rate was 23.3%.

This project is important. It is important from an economic standpoint and from the standpoint of boating safety. Further, the Department of Natural Resources has not only expressed its intent to serve as the non-federal sponsor, and to assume 50% of the construction costs, the Department has also expressed its intent to provide various support facilities to the federal project.

These additional items include a mooring area, boat docks, launching ramps, and public service facilities. Such support items are estimated at over $6 million. This cost must be assumed by the Department of Natural Resources, in addition to the $3.5 million which represents the 50% cost sharing of the proposed federal improvements.

In summary, the total project when completed will cost an estimated $13 million, $3.5 million federal and $9.5 million non-federal.

We urge the subcommittee to give favorable consideration to our request and recommend the necessary funding be added to the proposed budget for FY'84.

Maumee Bay State Park Shore Protection Measures

The Maumee Bay State Park shore erosion protection project has been recommended by the Corps to help arrest serious erosion along the park's Lake Erie shoreline. The Ohio Department of Natural Resources intends to implement a multi-million dollar capital improvements program, featuring development of a lodge, cabins and several ancillary recreational facilities. It is our purpose to establish a full-fledged state park in Northwest Ohio for the benefit of the public. However, we have not been able to proceed with our plans because the severe erosion problem would jeopardize our proposed improvements.

The plan recommended by the Corps provides a cost-sharing arrangement with a non-federal sponsor, and we have already submitted our letter of intent to meet the non-federal obligations which are required. In addition, the Honorable Marcy Kaptur, Congresswoman from the Ohio 9th Congressional District has introduced proposed legislation (H.R. 1651) to authorize the recommended project. This bill enjoys as co-sponsors several distinguished members of the Ohio Delegation. We are optimistic over passage of the bill and would therefore like for the Corps to initiate advanced engineering and design work on the proposed project.

Accordingly, we respectfully request that $200,000 be added by this subcommittee to the proposed FY'84 budget under the Continued Planning and Engineering category so that progress on the project will not be interrupted, pending Congressional authorization.

Geneva State Park Shore Protection

On September 23, 1982 the House Committee on Public Works and Transportation adopted a resolution requesting the Board of Engineers for Rivers and Harbors to review various completed reports with a view to determine the advisability of providing for beach and shoreline erosion control and related purposes at Geneva State Park and adjoining shorelines.

Geneva State Park, located adjacent to the Lake Erie shoreline, has experienced severe erosion over the past few years. This 750-acre park includes a 1200 ft. beach and 1,800 car parking area, as well as camping, hiking, and related recreational facilities. However, because of the increased erosion problems, the public has been denied use of all but 300 feet of the once extremely popular beach.

The park lies in an area of our state that has been extremely hard hit by the economic recession. Adjacent to the park are communities which cater to the resort trade and have particularly suffered as a result of the economic recession. These communities are vitally interested in restoring all public facilities, especially the Geneva State Park beach, as a means of helping to bring back the tourist trade.

We, in Ohio, have a fine public park at Geneva and feel a pressing need to provide the full service the public desires. Further, it is our intent to cost share and meet all required non-federal obligations should a shore erosion protection project be recommended by the Corps of Engineers.

We respectfully request, therefore, that necessary funding be included in the FY'84 proposed budget to enable the Corps to proceed with the authorized survey.

In conclusion, I sincerely appreciate your attention, and the opportunity to present this testimony on behalf of the State of Ohio.

Papillion Creek and Tributaries Project, Nebraska

STATEMENT OF MEL HOIER, CHAIRMAN, PAPILLION VALLEY PRESERVATION ASSOCIATION, NEBRASKA

ACCOMPANIED BY EVERETT HOLDEAN, DIRECTOR

Chairman HATFIELD. Now, I hoped not to use lights, but since we have taken so much time, I am going to start the light system. So, when you see the red light come on, that means your time has ended. I want to remind all the witnesses that the members of this committee can read, and, therefore, you are encouraged to highlight your testimony—we will read it, so you don't have to read it to us.

Would Mr. Holier from Nebraska come forward.

Mr. HOIER. Mr. Chairman and committee members, we can turn our statements in, all of them, they are all written.

Chairman HATFIELD. I would rather read it quickly and have you give us what you would consider the important points or the highlights.

Mr. HOIER. Very well.

Mine is very short. I am Mel Hoier and I am from Nebraska. We are here on behalf of the Papillion Valley Preservation Association and I have Mr. Everett Holdean with me, another director, and we will cut our testimony short, and if you have any questions, I will respond.

Chairman HATFIELD. Thank you very much.

Mr. HOIER. I will just summarize by saying that I will turn this in for inclusion in the record.

Chairman HATFIELD. It will be included at the end of your testimony.

STUDY OF NONSTRUCTURAL ALTERNATIVES

Mr. HOIER. Our association is asking you to continue to support our Congressman, Hal Daub, in getting funds to support the study being done by the Corps of Engineers. It is with highest expectations that we await results of this study, so that next year when we come back to Washington and ask you for funding for this study, that should be completed at that time.

The rest of my information has been submitted, Senator, and we thank you for your time.

Chairman HATFIELD. Mr. Hoier, I believe there is a study going on that will be ended this year or completed?

Mr. HOIER. Yes.

Chairman HATFIELD. Can you comment on that, give us an update of the progress?

Mr. HOIER. Yes. On February 5 of this year—I am talking about the Corps of Engineers when I say "they"—they brought us up to date as to the damages happening on this restudy, through the city of Omaha. And in May of this year, they have told us that possibly by May, they will come up with three alternatives to the original damage project authorized in 1968, the number I believe is S. 9483.

So we are waiting to hear from this response in May and we really want to—we are hoping that Congressman Daub has set up a coordinating committee of 11 people that sit on this board. We call ourselves the Papillion Watershed Coordinating Committee and we meet every couple of months. The Corps sits in and brings us up to date. Right now, we are waiting for this May meeting; they have three alternatives that will replace the original project.

Chairman HATFIELD. So that then you have an opportunity to input your views in this study?

Mr. HOIER. Correct.

Chairman HATFIELD. Did you have comments to make?

Mr. HOLDEAN. No, I just joined him.

Chairman HATFIELD. I wanted to make sure you folks had an opportunity to have an input into this study.

Mr. HOIER. Yes, and the Corps has operated really good with us. We just hope that the Missouri River runs through the city, and there is plenty of opportunity, we don't want to take the reclamation away, there will be plenty of that when this project is completed, but we do have a problem with them sometimes.

Chairman HATFIELD. That is very helpful, thank you.

Mr. HOIER. Thank you for your time.

[The statement follows:]

STATEMENT OF MEL HOIER, CHAIRMAN, PAPILLION VALLEY PRESERVATION ASSOCIATION, INC.

In 1981, our Congressman, Hal Daub, organized an ad hoc committee under the name of Papillion Watershed Coordinating Committee. It consisted of 11 people, comprising interested governmental agencies and private organizations. It was hoped that these people could, with the help of the Corps of Engineers, find an alternative to dams as a vehicle for flood control.

Prior to the congressional hearings in 1980, a seven-point design for action was prepared and approved by the county boards of Douglas, Sarpy, and Washington Counties, the Papio NRD, the Papillion Valley Preservation Association, and the Papio Flood Protection Association embodying the following points:

(1) Develop State legislation requiring control of water runoff in housing and/or commercial developments in the watershed.

(2) Promote the acceleration of Public Law 566 projects under the supervision of SCS and CAP projects of the Natural Resources District.

(3) Implement reasonable channelization measures to provide adequate runoff from the watershed.

(4) Continue enforcement of flood plain regulations by local units of government.

(5) Seek legislation bringing dam 20 back to active status.

(6) Urge funding and construction of dam 18.

(7) Deauthorization, by Congress, of the original Corps Papio project and proposed site 3A or a permanent injunction of all dams except Nos. 18 and 20, 19, and 21.

This agreement was presented as a joint resolution in 1980 at the congressional hearings as a basis for approval of a study of alternatives to Public Law 90–483 and for limited funds to keep the Papio project in an active status.

In 1981, the Congress was requested by resolution of the ad hoc committee to provide $5 million for construction on dam 20, planning for dam 18, and funding for the study of nonstructural alternatives to Public Law 90–483, which was approved. It also provided that unless unanimous agreement was reached in the ad hoc committee on the alternatives to be recommended by the Corps of Engineers study by September 30, 1983, the ad hoc committee would recommend deauthorization of all dams except 18 and 20.

On March 26, 1982, we received a letter from the Chief, Planning Division, of the Corps of Engineers, in which he stated that, "The report that reaffirmed that dam 10 should be built and proposed that dam 3A be built in lieu of dams 1 through 9, was returned to the Omaha District on February 10, 1982. Second, all dams other than 11, 16, 18, and 20 have been placed in the inactive status."

At the February 5, 1983, meeting, the Corps of Engineers informed the Papio Watershed Coordinating Committee that possibly by May 1983 they would present three alternative plans to be considered by this committee as alternatives to Public Law 90–483.

In summary, the PVPA asks that you continue to support Congressman Hal Daub in getting funds to support the study being done by the Corps of Engineers. It is with high expectations that we await the results of this study so that next year we can come back here to Washington asking for funds to implement the alternative plan.

STATEMENT OF MAYOR ERIC L. KNUDSEN, WASHINGTON, NEBR.

I request that your committee deny the Corps of Engineers any and all approval and/or funding for dams 10 and 3A in the Papillion Creek and tributaries flood and recreation dams project in Nebraska. Omaha and Sarpy County deserve something better than the Corps' dam approach, and so do we.

Now, as the mayor of our incorporated village of Washington, Nebr., may I ask that you take a real hard look at the Army Corps of Engineers Papio Creek flood and recreation project.

After 10 years of study, reevaluation, and many millions of dollars spent, two dams have been constructed and land purchased for a third dam. This dam site 20, now owned by the Federal Government, turned out to be a financial bonanza for a few speculators, and strange as it may seem, is no longer considered and cannot be justified on a cost-benefit (Corps figures).

The Corps of Engineers is now considering dam sites 10 and 3A; neither dam can be justified by anyone other than the Corps. In fact, a blue-ribbon panel of engineers hired by the Douglas and Washington County commissioners, and headed by Dr. Ray Linsley of California, were in unanimous agreement that dams 10 and 3A would be of little value as a flood control measure.

Recently, Omaha Corps officials agreed with several Nebraska State agencies that 10 and 3A will not be effective without a tough and strict flood plain management program, strictly enforced in Omaha and Sarpy County.

The Papio Valley NRD Board has also voted to withdraw support of dams 10 and 3A, but to endorse dams 18 and 20 on the west branch, if the Corps can now justify those two, for the Millard and Papillion areas.

This, in effect, brings us back to an early Corps alternative to the dams. They said Omaha can be protected from in excess of the 100-year storm with proper channel improvement and good flood plain management program, strictly enforced.

Recreation? The Corps has publicly stated there will be no skin-contact sport on dams 10 and 3A (no swimming and no water skiing) because of contaminated water. In fact, the weed, plankton, and algae growth could well contribute to extensive fish kill in 12 to 15 years.

Dam 3A will destroy our incorporated village of Washington, our homes, our school, our post office, our fire department, and several places of business. Dam 3A will also be a serious threat to the village of Bennington, their school, fire department, et cetera. The village of Kennard will be hurt, as well as the many farm families who will lose their homes and their very productive land—their very livelihood.

Let's not trade our fertile Papio Valley, a well-known valuable asset to so many, for dams 10 and 3A of such very doubtful and questionable value. Omaha and Sarpy County need flood control help. The Corps is capable of alternatives that will do the job much better than dams. They have in other areas.

Will you help stop this 3A monstrosity? Surely there are better things for the Corps to busy themselves with other than building dams on every little creek and stream.

STONEWALL JACKSON DAM, W. VA.

STATEMENT OF JOSEPH GRANT, REPRESENTING THE UPPER WEST FORK RIVER WATERSHED ASSOCIATION

Chairman HATFIELD. Next will be Peg Ormsby.

Mr. GRANT. Miss Ormsby could not make it today, so I will give that testimony.

I am Joseph Grant from West Virginia. I live in the area of the proposed Stonewall Jackson Dam project.

We opposed this project because it would inundate prime agriculture land, it is a poor project in the best of times, and in these times, I think this project should be reexamined.

Our organizations consists of over 1,000 members, which is a coalition of 30 organizations, and among them are the United Mine Workers and American Farm Bureau Federation.

We have submitted written testimony and I won't get into that, I will just highlight this.

BASIS OF OPPOSITION

We have come to the committee in past years and talked about the reasons why we think this is a poor project, and I would like to direct you to an investigation of Stonewall Jackson Dam by a subcommittee of the Committee on Environment, Energy, and Natural Resources and others, chaired by former Congressman Moffett. I have the findings in this booklet. They concluded the project was uneconomical and should be halted, and this is substantiated by testimony by the GAO offices, saying that the Corps is using unrealistically low interest rates, and that was very critical of the cost-benefit ratios and exaggerations on the Corps of Engineers.

The strongest thing is that too much money has already been spent to the tune of some $60 million. I would like to relate to you the subcommittee's response to that. In April 1982 they put together figures on 52 water projects. It showed the Stonewall benefit-to-cost ratio would be 0.94 to 1 at 4⅝ percent interest, 0.70 to 1 at 7⅝ percent interest, and 0.40 to 1 at 7⅝ percent when water quality benefits were omitted. The committee found water quality benefits to be highly questionable.

The staff subtracted the money there, minus the salvage value of the land which is there, and from the amount of the project that the project would lose, and the difference was $2.5 million. What that means is, if we stop the project now, over the time of the project, the fifth year expansion, we would save $2.5 million over and beyond if we realized the benefit that the Corps of Engineers is projecting. So if we stop the project now, we will make money.

There was no construction whatsoever on the dam itself, just road area and natural gas compressure stations.

We who live in the area—people are still living on the land and still farming it. Many of the people there are some that would like the opportunity to buy their land back from the Corps of Engineers. I would like to make a point about jobs now.

It was attempted to put money for Stonewall into the omnibus jobs bill that came down; I am not sure if it was stuck back in or not. However, there are 350 temporary jobs being created by this project. This cost could exceed $350 million. Now we are talking about $1 million per temporary job for 3 years. I think we could utilize that money much more effectively than $1 million for a 3-year temporary job. The local people helping to build the roads—as yet there are very few local people working on the project.

Last fall we elected a Congressman opposed to the Stonewall Jackson Dam. Representative Bob Wise won the election, and part of his platform was opposition to the building of the Stonewall Jackson Dam. Congressman Wise is an old friend from way back, he worked in the State Senate, and he tried to rescind the State's recreation agreement with the Corps of Engineers. Last month in the House he took action to see no money would be included in the omnibus plan for the Stonewall Jackson Dam.

We are proud Bob Wise is our Representative, and he is our Representative and opposed to the Stonewall Jackson Dam and he plans to fight it in the House. The money should be utilized different places.

I want to thank the committee for this opportunity to have the time to address you on this subject.

Chairman HATFIELD. Thank you very much.

[The statement follows:]

STATEMENT OF JOSEPH GRANT, REPRESENTING THE UPPER WEST FORK RIVER WATERSHED ASSOCIATION, WEST VIRGINIA

The Upper West Fork River Watershed Association represents over a thousand individuals and thirty organizations who oppose construction of the Stonewall Jackson Dam project in Lewis County, West Virginia. In spite of the fact that 60 million dollars has been sunk into this project, opposition still grows in West Virginia and nationally as more and more state and federal taxpayers become aware of the tremendous cost of a project whose benefits are limited to a small local area, and for which less expensive alternatives exist.

We who are from Lewis County and live in, around and outside of the project area remain firm in our belief that the destruction of prime farmland in our county must not be allowed to occur. If the project had merit, it would still be wrong to destroy this farmland. If the project were providing needed jobs for West Virginians, it would still be wrong to destroy this farmland. If West Virginia needed and could afford another state park, it would still be wrong to destroy this farmland. But the truth is that the project lacks merit; is not employing local labor in any great numbers; and that the State of West Virginia, devastated by the economic recession, is barely able to retain essential services now, much less make good on its huge financial commitment to an unneeded state park development at Stonewall.

That the project lacks merit was the conclusion of the House Subcommittee on Environment, Energy and Natural Resources (of the Government Operations Committee) after an investigation and hearings in 1981 on Stonewall. Subcommittee Chairman Toby Moffett stated at the December 11, 1981 hearing that water quality benefits, which comprise fully 50% of the project's justification "have little basis in fact" thus depriving the project "of whatever economic and common sense justification it may have enjoyed when originally authorized."

The General Accounting Office which did an analysis of project benefits at the request of the subcommittee, reported finding major errors in method which result in project benefits being exaggerated. Some comments:

(1) RECREATION The Corps based its per capita use estimates on 1964-69 data on a California and Kansas dam, and has not updated estimates to reflect the fact that attendance has dropped by half at the California reservoir. The Corps increased benefits by redefining the market area; assuming population growth which has not occurred; and by increasing the per day value of a recreational visit to the maximum allowable - $1.50 - even though the average value used for 21 projects underway at about the same time as Stonewall is 85 cents.

(2) FLOOD CONTROL Flood control benefits are based on a 1963 flood damage survey which was not based on actual flood damage, but only on estimates. To update data the Corps uses a construction cost index which is based on the cost of labor, structural steel, cement and lumber, when the damages incurred in Weston and Clarksburg flooding is to household and building contents, lost wages and cleanup costs. The Corps' flood damage estimates have risen while population in the flooded areas has declined - 30% in Weston and 20% in Clarksburg.

(3) WATER SUPPLY Weston has signed no contract to buy water from the reservoir and the water company advised GAO that supplies are adequate for the foreseeable future. Clarksburg is not buying water storage from the reservoir.

(4) AREA REDEVELOPMENT Twenty-five percent of these benefits have already been realized, but in calculating the remaining benefits, the full benefit was claimed.

(5) COST/BENEFIT RATIO The Corps is calculating the b/c ratio by using remaining costs and remaining benefits, rather than the total costs and benefits. This makes the project look better and better, as most of the benefits occur after the project is built and thus stay the same, while the Corps deducts the amount already spent from the cost side of the ratio. While the Corps reports a remaining cost/remaining benefit ratio of 1.53 to 1, the total cost/total benefit ratio is 1.07 to 1.

(6) INTEREST RATE The Corps uses the unrealistic 4 5/8 % interest rate. At the present interest rate of 7 3/8% the remaining cost/benefit ratio to 1.2 to 1 and the total cost/benefit ratio is a negative .85 to 1.

GAO did not scrutinize the project costs, due to lack of time, but reported that the productivity of the land before it is purchased for the project is not included as a project cost.

In April, 1982, the subcommittee staff put together figures on 52 water projects which are less than 25% complete. It showed Stonewall's b/c ratio as follows:

at 4 5/8%	.94 to 1
at 7 5/8%	.70 to 1
at 7 5/8% omitting water quality & redevelopment benefits	.40 to 1

Using the .70 to 1 ratio, the staff subtracted the amount of money appropriated through FY 1982 (minus the salvage value of the land) from the amount of money the project would lose over its lifetime and found a net savings of $2.5 million. In other words the government would actually save money by scrapping the project.

We want the committee to understand that no construction what so ever has yet occurred at the dam site. This critical juncture would be reached with the FY84 appropriation. We who live in the area can testify that damage to the land is yet minimal. While land (but not mineral) acquisition - through condemnation or sale - may be 80% complete, people still live and farm there. Many who have moved would be interested in buying their old land back should the project be shelved. Where they could not, other private buyers could easily be found, the demand for farmland in West Virginia being great. An alternative Soil Conservation Service small watershed dam system could be implemented and, where needed, land belonging to the Corps of Engineers could be transferred to the Agriculture Department. Last July we asked for an SCS estimate of the cost of a watershed system for out area, and were told by Edward Bumgarner, Executive Secretary of the State Soil Conservation Committee that the cost would be around $14 million - fully 15 times less than Stonewall. And the majority of the farmland would remain intact and its economic value retained. We who have committed out time, energy and money to saving this land stand ready to do the work needed to implement these goals.

The main beneficiary of Stonewall is the city of Weston, a small city of declining population (approx. 8,000 - 1970; approx. 6,000 - 1980.) Local promoters of Stonewall have maintained through the years that Weston cannot afford its share of a local flood control project. But two years ago, the Weston Chamber of Commerce began buying computer operated Christmas tree lights - to the tune of $25,000 - to date, which are displayed over Main Street during the holiday season and then put in storage. At this moment in the county, fund drives are going forward to collect $80,000 for repairs at the county park, $60,000 for land for a county 4-H center, $20,000 to send the high school band to Florida, and money is being collected to build an Agriculture and Forestry Center in the county. Perhaps we are displaying old-fashioned rural values when we fail to set a high priority on Christmas lights and band trips. While the dam promoters describe the flood plain residents as living in terror every time it rains, and allege millions of dollars of property damage from flooding; 20,000 acres of our land is being destroyed because Weston residents cannot afford to contribute to a local flood control project. And no one has yet explained how Weston will repay $4,300,000 at interest and $12,000 annually for maintenance for water storage at Stonewall -- for which it has yet to sign a contract with the Corps.

On the state level, cost-sharing for recreation at Stonewall rests on a non-binding contract with the Corps contingent on the West Virginia Legislature appropriating the pay back money from year to year. Unbeknownst to the legislature, the state's financial committment for this project has skyrocketed. According to figures we obtained from the Corps last month, the state's liability now stand at:

$16,305,000	at 5.683% interest for initial recreation development
$ 5,100,000	future recreation development
$ 1,117,500	annually for maintenance
$ 5,472,600	100% state funded facilities

This in a state with an unemployment rate at 20% and a state budget deficit for the remaining '83 fiscal year of 93 million.

Traveling 200 river miles north to Pittsburgh, we find interests there claining that Stonewall will provide Pennsylvania with needed flow augmentation; when, in fact, Stonewall's impact on the Monongahela River diminishes at Fairmont, West Virginia. Proof of this is in a letter from the Corps to Governor Rockefeller dated December 22, 1978 -- responding to his concern about whether low flow augmentation water from Stonewall could be used at the proposed coal liquifaction plant to be located north of Morgantown, West Virginia -- in which the Corps states, "...the authorized project (Stonewall) benefits would not be degraded by the consumptive withdrawal (at SRC-II). This conclusion recognizes the location of the withdrawal point downstream of the reach of identified significant water quality needs."

The Corps further emphasized that they could not guarantee the availability of water from Stonewall anyway. This is because West Virginia has no water use law regulating individual's or industry's ability to withdraw water from the river. It is, therefore, possible that one industry located a mile below the dam could withdraw all of the low flow augmentation water for its own use and nothing could be done by law to stop it. For these two reasons, the claiming of benefits from Stonewall for Pittsburgh is totally absurd.

The new cost estimates for Stonewall are now out. They show a two million dollar increase for land acquisition because landowners are increasingly going to condemnation and being awarded larger settlements than the Corps' appraisals. The Corps states in its PB-3 this is resulting in increased court costs because of the time and manpower involved. In other words Corps' practice of offering landowners less than fair market value is costing the taxpayer precious tax dollars.

In the 1982 election we had the opportunity of voting for a congressional candidate who opposes Stonewall. Bob Wise won the election overwhelmingly. The republican incumbent, who in 1981 had voted against funding for Stonewall, switched his position in favor of the dam, a move that resulted in a negative editorial in one state newspaper. Mr. Wise made clear his opposition to Stonewall; it was an issue in the campaign. Congressman Wise has since taken action in the House in opposition to Stonewall and has testified to that effect before this committee.

Political support for the project is waning. Out state senator, Jean Scott Chace, for the last three years has spoken out courageously against this project proposed for her county. State Agriculture Commissioner Gus Douglass continues to oppose Stonewall. In 1980 the West Virginia senate passed a resolution declaring its unwillingness to fund the state park and recommending that the cost-sharing agreement be rescinded.

With the economic recession and the huge federal budget deficits, we find it incredible that this project continues to be funded. We ask the committee to drop funding for the project and allow the local people, with the support of Congressman Wise, to return our land to private ownership and begin the work of solving our local problems locally.

NEW YORK AND NEW JERSEY NAVIGATION PROJECTS

STATEMENT OF JOSEPH J. BIRGELES, REPRESENTING THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY

Chairman HATFIELD. Our next speaker is Anthony Tozzoli.

Mr. BIRGELES. Good morning, I am Joseph J. Birgeles. Mr. Tozzoli was unable to be here today, but I will wish to submit his statement.

Chairman HATFIELD. It will be received for the record and included following your oral testimony.

Because of the limited time available and the number of speakers we have left, I would ask you to summarize.

DEEP-DRAFT PORT USER FEE ISSUE

Mr. BIRGELES. Mr. Chairman, in the President's budget submitted to Congress for the Corps civil works program of fiscal year 1984, it states that the President will submit legislation to allow the collection of fees from users of deep-draft ports to reduce or offset by $454,000,000 the total appropriation request. We feel compelled again, as we did last year, to register objections to this proposal until legislation has been enacted.

During this period of policy uncertainty, such premature proposals merely tend to adversely impact upon the economic movement of international trade and affect American trade competitiveness. The needs of ports, which accounted for more than $10 billion in Federal tax and custom revenues, go on. If the port industry is to continue to provide national economic benefits and assist in maintaining our national security, the funding for new dredging and maintenance of existing navigation channels must not be ignored or delayed while awaiting legislation which may or may not happen.

We, and local interests, are completely aware of the Nation's fiscal condition, and thus our appropriation requests which we will present to you constitute the basic minimum needs for the Port of New York and New Jersey. Our additional appropriation requests will not only create major trade assets for the port, but will provide additional employment, tax revenues, and economic redevelopment of industry.

Port of New York and New Jersey interests recommend an additional appropriation of $8,145,000 in Federal funds in fiscal year 1984 allocated among six authorized Federal navigation projects. The Federal budget allotment for these projects is $8,205,000. Our statement shows project recommendations of local interests.

NEW YORK HARBOR AND ADJACENT CHANNELS STUDY

The New York Harbor and Adjacent Channels study is the result of the Corps of Engineers combining the New York Harbor Claremont Terminal study, authorized by a House Committee on Public Works resolution adopted July 10, 1968, and the New York Harbor Ambrose Anchorage channels study, authorized by a December 5, 1980, resolution of the Senate Committee on Environment and Public Works. The purpose of this study is to determine the feasibility of modifying, including enlargement and deepening, of the existing 45-foot-deep Federal Ambrose and Anchorage channels, and the privately maintained 24-foot deep Claremont and 35-foot Port Jersey channels for commercial deep-draft navigation. The Ambrose and Anchorage channels function as the main access channel to the Port of New York and New Jersey. The study will include consideration of providing 60 feet or more of depth within the Abrose and Anchorage channels, and the construction of an access channel there from shoreward to Port Jersey for construction of a coal terminal.

The port authority is studying the feasibility of constructing a modern coal facility to transload more than 10 million tons of steam coal annually in the Port of New York and New Jersey for export and domestic markets. To insure that a site will be available for the coal terminal, the port authority acquired 469 acres of land at a price of about $12.2 million.

Foreign buyers have shown a keen interest in a deep harbor in New York. To provide adequate leadtime to firm up coal delivery arrangements with these buyers, we require timely decisions on the Corps proposed channel deepening study which is scheduled to be completed during mid-1986. We understand that environmental and engineering studies will require more detailed analysis than initially planned, thus seriously delaying completion of the study.

The fiscal year 1984 Federal budget allots only $1.3 million for the Corps to complete the stage II detailed environmental, engineering, and economic studies. To complete these studies in a timely manner, we strongly urge a total of $2.3 million be provided to assure that the Corps survey report and environmental impact statement (EIS) be completed as originally scheduled.

KILL VAN KULL NEWARK BAY CHANNELS, NEW YORK AND NEW JERSEY

On July 14, 1972, a critically needed study of a deepening and selective widening of the Kill Van Kull and Newark Bay channels was authorized by resolution of the House Committee on Public Works. This Federal waterway serves the general cargo container terminals at Elizabeth and Port Newark on Newark Bay, as well as oil terminals on the Kill Van Kull. The 2,200-acre Port Newark and Elizabeth seaport complex, a $400 million development with an annual payroll in excess of $100 million, handled more than 12.5 million tons of cargo in 1982.

On December 14, 1981, the Chief of Engineers transmitted the Corps of Engineers review of reports for recommended improvements to Congress for authorization as a construction project. This survey report recommends deepening the existing 35-foot channel to 45 feet below mean low water and for the easing of selected channel bends. The plan of improvement has an impressive benefit-to-cost ratio of 7 to 1 and is the Corps' national economic develop plan and least environment damaging plan.

No funds are included in the Federal budget for the project. Port interests are anxious to avoid further delays in this 11-year-old study. Therefore, we urge that $1.5 million be provided in fiscal year 1984 for continuation of planning and engineering.

NEW YORK HARBOR COLLECTION AND REMOVAL OF DRIFT PROJECT

The port authority has lead local support for the New York Harbor collection and removal of drift project since it was authorized as a study in 1963. Since authorization of construction in 1974, it has been the privilege of the port authority to serve as the chairman and spokesman for the New York and New Jersey Waterfront Cleanup Project Coordinating Committee created to implement the project. This committee consists of representatives from the States of New York and New Jersey; the city of New York; the New Jersey municipalities of Elizabeth, Bayonne, Newark, Hoboken, Jersey City, Weehawken, Edgewater, and North Bergen; and the Corps of Engineers, all working together to further the waterfront cleanup project.

The coordinating committee, based on the availability of required local matching funds and current project goals, has concluded that the federally budgeted sum of $1.3 million will constrain the progress that could be realized. The budgeted funds would only provide startup funds of $1 million for actual cleanup work on the Stapleton, Staten Island, waterfront, and $300,000 for advanced engineering and design work for future cleanup along the Arthur Kill on the New Jersey side, Kill van Kull on the Staten Island shore, and the Bayonne, N.J., waterfront.

The $1 million contained in the Federal budget falls short of local project objectives for the Stapleton cleanup work; therefore, an additional appropriation of $1.5 million is required. In addition, based on project work schedules, resources and readiness as determined by local interests, work could also commence on actual cleanup of the Weehawken/Edgewater waterfront at a cost of $1 million, Shooters Island at $200,000, and the Hoboken waterfront at $1 million. Thus, construction could begin on four different waterfront areas or reaches during fiscal year 1984 in the bi-State harbor.

With adequate Federal funding, local interests are prepared to fund more than $28 million for repair work on waterfront structures and over $10 million for actual removal work. The committee has estimated that the construction work alone on the four reaches will provide more than 600 jobs.

LIBERTY STATE PARK AND SEAWALL PROJECT

Thanks to past adequate Federal funding, Liberty State Park and the Manhattan East River waterfronts have already been transformed from useless and decayed waterfronts into impressive, well-patronized, and growing waterfront areas. The cleanup project is an outstanding showcase for unified bi-State and intergovernmental actions. Many past complex project issues have been solved and adequate levels of local matching funds are available to keep the project on schedule. Thus, we are ready to expand the cleanup project well throughout the harbor. This is only possible if Congress will do its part in appropriating the needed Federal funds.

We, therefore, urge that a total of $5 million, or $3.7 million more than budgeted, be provided to take advantage of local matching funds and growing enthusiasm for waterfront cleanup. This will assure the full potential of cleanup work and job generation for the cleanup project in fiscal year 1984. Commissioner Seale's statement elaborates on the balance of our funding recommendations for other Federal navigation projects in the port. We would like to have that included in the record.

Thank you, Mr. Chairman.

Chairman HATFIELD. Thank you, Mr. Birgeles.

[The statement follows:]

STATEMENT OF ANTHONY J. TOZZOLI, DIRECTOR, PORT DEPARTMENT, THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY, AND LINDA W. SEALE, COMMISSIONER OF PORTS AND TERMINALS, NEW YORK CITY, N.Y.

Representing also:

Maritime & Port Organizations

Board of Commissioners of Pilots of the State of New Jersey
International Longshoremen's Association
Local 333, United Marine Division - ILA, AFL-CIO
Maritime Association of the Port of New York
Maritime Port Council of Greater New York and Vicinity
New York City Port Council
New York-New Jersey Port Promotion Association
New York Shipping Association
New York Towboat and Harbor Carriers Association
Save Our Port Coalition
United New Jersey Sandy Hook Pilots Benevolent Association
United New York Sandy Hook Pilots Benevolent Association

Civic Organizations

Brooklyn Chamber of Commerce
Chamber of Commerce of the Borough of Queens
City of Newark (NJ)
Commerce and Industry Association of Northern New Jersey
Department of Environmental Protection, State of New Jersey
Downtown Brooklyn Development Association
Greater Newark Chamber of Commerce (NJ)
Hudson County Chamber of Commerce and Industry (NJ)
New Jersey Alliance for Action
New Jersey Citizens Transportation Council
New Jersey Industrial Development Association
New Jersey State Chamber of Commerce
New York Board of Trade
New York Chamber of Commerce and Industry
Staten Island Chamber of Commerce
Union County Chamber of Commerce (NJ)
Union County Planning Board (NJ)
West Side Association of Commerce in the City of New York, Inc.

I am Anthony J. Tozzoli, Director, Port Department, of The Port Authority of New York and New Jersey. I am joined by Commissioner Linda W. Seale of the City of New York Department of Ports and Terminals. Together we share the responsibility of also representing the 30 port, maritime, and civic interests listed on the cover of this statement in urging that Federal funds be appropriated in Fiscal Year 1984 for essential navigation projects in the Port of New York and New Jersey under the Civil Works program of the U.S. Army Corps of Engineers. We appreciate the opportunity to present our views and recommendations on these matters to the distinguished members of this Subcommittee.

In the President's Budget to Congress for the Corps Civil Works program for Fiscal Year 1984, it states that the President will submit legislation to allow the collection of fees from users of deep-draft ports to reduce or offset by $454,000,000 the total appropriation request. We feel compelled again, as we did last year, to register objections to this proposal until legislation has been enacted.

During this period of policy uncertainty, such premature proposals merely tend to adversely impact upon the economic movement of international trade and affect American trade competitiveness. The needs of ports, which accounted for more than $10 billion in Federal tax and custom revenues, go on. If the port industry is to continue to provide national economic benefits and assist in maintaining our national security, the funding for new dredging and maintenance of existing navigation channels must not be ignored or delayed while awaiting legislation which may or may not happen. We and local interests are completely aware of the nation's fiscal condition, and thus our appropriation requests which we will present to you constitute the basic minimum needs for the Port of New York and New Jersey. Our additional appropriation requests will not only create major trade assets for the Port, but will provide additional employment, tax revenues, and economic redevelopment of industry.

Summary of Recommendations

Port of New York and New Jersey interests recommend an additional appropriation of $8,145,000 in Federal funds in Fiscal Year 1984 allocated among six authorized Federal navigation projects. The Federal Budget allotment for these projects is $8,205,000. Our statement shows project recommendations of local interests.

	Funding Recommendation	
Project	Federal Budget	Local Interests
Study Category		
New York Harbor and Adjacent Channels, NY & NJ	$1,300,000	$2,300,000
Kill van Kull and Newark Bay Channels, NY & NJ	None	1,500,000
Arthur Kill Channel, Howland Hook Marine Terminal	155,000	200,000
Gowanus Creek Channel, Brooklyn, NY	None	200,000
Construction Category		
New York Harbor Collection and Removal of Drift Project, NY & NJ (Waterfront Cleanup)	$1,300,000	$5,000,000
Maintenance Category		
New York and New Jersey Channels, NY & NJ	5,450,000	7,150,000

* * * * *

Thank you, Mr. Tozzoli. I am Linda W. Seale, Commissioner of Ports and Terminals, City of New York. I wish to add my appreciation for this opportunity to convey to you the joint recommendations of the City of New York, the Port Authority, and local interests for Federal navigation projects in the Port of New York and New Jersey. Before I discuss the other navigation projects in our Region's recommendations, I want wholehartedly to endorse the funding requests expressed by Mr. Tozzoli, in particular, the $5,000,000 appropriation necessary for the Corps of Engineers to continue progress on the New York Harbor Collection and Removal of Drift Project. I cannot overemphasize how much this Region is counting on Congress to respond to our request. The States and City of New York together are prepared to provide enough funds to support construction work at the Stapleton, Shooters Island, Weehawken, and Hoboken waterfronts. Considering the financial difficulties of local governments in this Region, this ability to support increased Federal funding is a clear indication of the degree of commitment that exists for this Project and is an opportunity that should not be wasted by an inadequacy of Federal funds.

Arthur Kill Channel, Howland Hook Marine Terminal, NY

The Arthur Kill Channel, Howland Hook Marine Terminal study was authorized by a House Committee on Public Works and Transportation resolution on May 9, 1979. The purpose of this study is to determine the feasibility of deepening and widening the existing Federal navigation project--"New York and New Jersey Channels"--from deep water in Upper New York Bay westward to the New York City Howland Hook Marine Terminal, Staten Island, and to provide a vessel turning basin to serve this facility. The Howland Hook Marine Terminal is a $100 million, 200-acre facility that due to today's modern and planned container vessels is served by insufficient channel depths, widths, and alignment. Existing channel dimensions present hazardous navigation conditions for vessels and are delaying the planned expansion of the terminal to 500 acres.

The Corps of Engineers reconnaissance report completed during August 1981 for this study project established interest in extending channel deepening beyond the Howland Hook Terminal to accommodate the Exxon Bayway, Linden, New Jersey, and Gulf Oil, Staten Island, terminal facilities. Channel deepening to these facilities would reduce the requirement to lighten tankers at crowded harbor anchorages, thus reducing transportation costs, collisions, and environmental damage.

The goal was to have this study completed in one year. However, the extended study area, engineering, environmental, and economic studies required more time and funds than we had initially anticipated. As a result, the total study costs have escalated, and the completion date is now June 1985.

This study could be completed during Fiscal Year 1984 with an appropriation of $200,000, but not with the sum of $155,000 as contained in the Federal Budget. We, therefore, strongly urge that a total of $200,000 be provided to complete this work without interruption or further delay.

Gowanus Creek Channel, Brooklyn, NY

On October 10, 1974, a critically needed study of the navigation problems and needs in Gowanus Creek Channel, New York, was authorized by House Committee on Public Works resolution. This Federal waterway functions as an approach to extensive commercial wharehouses, petroleum, and general cargo terminals.

In March 1982, the U.S. Army Corps of Engineers, Board of Engineers for Rivers and Harbors, reviewed the District and Division Engineers Survey Report which recommended modifying the existing 30-foot Federal navigation channels in Gowanus Creek Channel to 35 feet, except for the reach between 21st Street and Sigourney Street where 32 feet was recommended. The Board recommended modifications that were generally in accordance with the Plan of Improvement identified by the reporting officers. In addition, the Board recommended that a 40-foot depth be provided in lieu of the 35-foot plan. This would provide more efficient movement of deep-draft cargoes, and encourage upgrading of area facilities.

The Plan of Improvement would provide benefits to New York City in several ways. First, the increased depths would reduce the necessity to lighten oil tankers in the harbor thereby reducing the potential for marine accidents and environmentally harmful oil spills. Second, the reduction in lightering to barges at anchorage would result in reduced transportation of petroleum products by eliminating delay and paying for extra handlings. A third benefit would be reduced transportation costs for dry cargo in vessels and barges which would take advantage of the greater depths. Furthermore, this plan would help in the revitalization of the Brooklyn waterfront.

No funds are alloted for this project in the Fiscal Year 1984 Budget; we thus urge that an appropriation of $200,000 be made available to the Corps of Engineers for continuation of planning and engineering so as to avoid another year of delay in this important project.

New York and New Jersey Channels, NY & NJ

Corps of Engineers channel condition surveys have determined that additional shoaling has occurred in New York and New Jersey Channels, New York and New Jersey project, specifically, the shoaling of the South of Shooters Island Reach in the range of 10 feet above the authorized project depth of 30 feet at mean low water. Maintenance dredging of the Reach is required for marine industries located on the waterway and for vessel safety.

One company located along the waterway, Jackson Engineering Company, Inc., has invested $18,000,000 in ship repair facilities and currently employs 150 people. This company projects a need for more than 300 employees, provided that the shoaled channel is maintained at its authorized project depth. While the Federal Budget provides $5,450,000 for maintenance work on the entire 30-mile New York and New Jersey waterway, an additional $1,700,000 would provide for restoration of the authorized project depth in the South of Shooters Island Reach. Therefore, we strongly urge a total appropriation of $7,150,000 for this project.

* * * * *

I want to conclude this testimony by assuring you that wherever possible port recommended appropriations requests have been kept as low as possible. Port interests are seeking appropriations for Federal waterway projects that exceed the Federal Budget recommendations by $8,145,000. Of this amount, $3,700,000 is for the vital New York Harbor Collection and Removal of Drift Project, a waterfront cleanup project with wide ranging benefits to revitalize the bi-State Port.

Viewed in the perspective of the nation's leading seaport and metropolitan region, we consider our requests consistent with Congressional efforts to reduce unemployment and stimulate economic growth. Excessive delays in funding waterway projects cause higher port costs, loss of employment and terminal construction, and slow future economic recovery. The Port of New York and New Jersey is a major economic resource in a nation urgently requiring economic stimulation. It is in this spirit that we invite your understanding and favorable actions on our recommendations.

Thank you.

DELAWARE RIVER NAVIGATION PROJECTS

STATEMENT OF PAUL S. IVES, CHAIRMAN, JOINT EXECUTIVE COMMITTEE FOR IMPROVEMENT AND DEVELOPMENT OF THE PHILADELPHIA PORT AREA

Chairman HATFIELD. Now I would like to invite Mr. William Harrison to testify on navigation projects relating to the Philadelphia Port and Delaware River.

Mr. IVES. My name is Paul Ives, chairman of the joint executive committee.

From the witness list we are submitting for the record, we had quite a delegation of port leaders from the Delaware ports. Because of another appointment, Mr. Harrison had to leave, but I am very sympathetic with your time problem, it is not my style to read testimony which we are entering in the record, so I want to take the limited time available which we are combining to introduce the people here from the Delaware River area, and to just tell you in very few words what our problem is here.

As I said I am Paul Ives, chairman, on my right is Phillip Charles, on my left Mr. Lewis Caccese, our consultant to the committee, and Mr. John McGary, vice president of the PENJERDEL Council. We are made up of representatives of top executives in the Ports of Philadelphia, Wilmington, and the South Jersey belts. We are a tri-State port. Our river runs through three States and we have ports in all three of the States—in Wilmington, Del., Philadelphia, Pa., in the New Jersey area, and up and down the rivers.

MAINTENANCE DREDGING OF AUTHORIZED CHANNELS

Our principal problem is that we have no new projects in mind, and we are not in line for new construction and a lot of new channels.

We want to keep our presently authorized channels which in the main river is authorized at 40 feet, and the Port of Wilmington is authorized for 45, and the Schuylkill is authorized for 43 feet; we would like to keep them at their maximum dimensions as authorized presently by law.

Unfortunately, the Corps of Engineers, despite their best efforts, have not been able to keep these channels at their full authorized depths. They constantly dredge, but due to lack of funding, controlling depth at times is as low as 33 feet.

I would like to point out that the ports in the Philadelphia area, the Delaware River ports, contained seven oil refineries; we are the largest oil refiners on the east coast of the United States. We bring crude oil in and are fast becoming a major port for export, and this is what is bringing the problem to a crunch. We can play with the tide in bringing the big ships up the river and skin over some of these shoals if we wait for high tide. Unfortunately, there have been heavy investments in bulk loading for coal and grain, and we are beginning to export more and more, and this is being done in large ships.

There is no way we can take a large ship down the river over one of these 33- or 35-foot spots when we have to meet a low tide somewhere.

So, it is imperative the river be maintained at its full draft at all times.

Our sounding charts show that.

That, Mr. Chairman, is really the point of my message, and I would like to at this time ask Mr. McGary if he would like to amplify on what I said?

STATEMENT OF JOHN McGARY, VICE PRESIDENT, PENJERDEL COUNCIL

Mr. McGARY. My name is John McGary, vice president of the PENJERDEL Council. The council is a regional organization of industry and professions with membership throughout the tri-State area in New Jersey, Pennsylvania, and Delaware.

I concur with what my colleague has said here and to conserve your time, I will put my full statement in for the record.

Chairman HATFIELD. Thank you, Mr. McGary.

Mr. IVES. I would like to summarize, Mr. Chairman, by saying that we are a producing segment of the economy. The port is a moneymaker. We are returning to the Federal Government close to $300 million in customer receipts alone due to maritime activities on our river. The Government is reinvesting in the vicinity of $30 million a year to keep the channels open, so we can make $300 million for them. That is nearly a 10-to-1 ratio of benefit to cost. We think that is good business and we think the Federal Government should be protecting its investment by keeping the channels dredged so we can return even more to the Federal trade.

[The statements follow:]

STATEMENT OF PAUL LANE IVES, JR., CHAIRMAN, JOINT EXECUTIVE COMMITTEE FOR THE IMPROVEMENT AND DEVELOPMENT OF THE PHILADELPHIA PORT AREA

IDENTIFYING REMARKS

The Joint Executive Committee for the Improvement and Development of the Philadelphia Port Area is port-affairs spokesman for twenty-one Delaware Valley civic and trade associations whose names appear at the bottom of this letterhead page. Organized in 1888, this Committee has participated in and promoted all major navigation improvements to the Delaware and Schuylkill Rivers and to the Chesapeake and Delaware Canal. The members pay no dues beyond the nominal amounts needed to cover the Organization's administrative expenses and the Officers serve without compensation.

Our Delaware River Ports handled approximately 58 million tons of international cargoes during calendar year 1982. This commerce generated more than a billion dollars into the economy of the tri-state Delaware Valley region. During 1982 the Port contributed strongly toward the United States trade balance through the export of coal, grain, automobiles, chemicals, machinery, and steel products. Seven major oil refineries; the largest refinery complex on the east coast, plus one of the Nation's largest steel mills are located along the Delaware River. In addition to the support these facilities lend to national defense, a U.S. Naval Base is strategically located at the confluence of the Delaware and Schuylkill Rivers. In 1982 the Ports of Philadelphia produced $281 million for the Federal Government in Customs Receipts.

SUMMARY

Current funding levels are insufficient to maintain the Delaware River ship channel at its authorized depth of 40 feet. During the past year, 35 foot depths have been more the rule, depreciating to as low as 33 feet. No funds have been provided in the FY'84 Budget for the maintenance of Marcus Hook and Mantua Creek Anchorages. These anchorages are required for the safe and expeditious movement of ship traffic on the Delaware River. Vital port-related studies lag well behind schedule delaying future development.

FULL TESTIMONY

The proposed FY'84 budget provides the U.S. Army Corps of Engineers with the following amounts for the operation and maintenance of completed navigation projects in our area of interest:

Delaware River, Philadelphia to the Sea	$22,246,000
Delaware River, Philadelphia to Trenton	3,712,000
Schuylkill River	1,721,000
Wilmington Harbor	1,627,000
Chesapeake and Delaware Canal	8,126,000
Total	$37,432,000

We are informed by the Philadelphia District Engineer that the monies which have been budgeted in FY'84 for the navigation projects referred to above are sufficient to perform routine maintenance dredging; comparable to the maintenance dredge patterns of previous years. We in the Port Community consider this level of funding unsatisfactory.

Delaware River - Philadelphia To The Sea

Although we have an authorized 40 foot channel in the Delaware River from Philadelphia to the Sea, we have been suffering with inadequate maintenance. During the past year our 40 foot channel did not exist; 35 feet was more the rule with depths in the channel depreciating to as low as 33 feet during the year. This is an intolerable situation which plays havoc with the users of the Delaware River ship channel who have a right to rely on the mandated 40 foot channel.

Seven major oil refineries are located on the Delaware River, making this the largest refining center on the east coast. There is a modern steel mill employing over 8,000 people when operating at capacity. Modern marine terminals capable of handling containerized breakbulk and roll-on/roll-off cargoes are located at the Ports of Camden, Gloucester, Philadelphia, and Wilmington on the Delaware River. There are large coal and grain exporting facilities as well as chemical plants adjacent to the River. All of these, representing billions of dollars in shoreside investment rely on the mandated 40 foot channel.

Each foot of restricted draft can mean as much as $30,000 per trip to vessels using our Delaware River ship channel. The inadequately maintained channel is restraining our commerce and tends to divert ship traffic to ports offering ship drafts consistent with federally authorized channel depths. The competitive nature of the shipping business is such that, we, in this region, are severely penalized by the inadequate depths that are prevailing.

We urge the Congress to provide all O & M monies necessary to assure that we have at all times a 40 foot channel, as is authorized.

Delaware River Anchorages

In addition, we are concerned that the President's Budget contains no funds for the maintenance of our Delaware River Anchorages.

The center of maximum waterborne commerce activity is at Philadelphia, PA, Camden, NJ, and Marcus Hook, PA. These centers are served by the Mantua Creek and Marcus Hook Anchorages. It is not possible to safely sustain a high level of waterborne commerce without providing adequately maintained anchorages. These anchorages are subject to steady shoaling and consistent maintenance is required to maintain reasonable depths. We urge that an additional $4.5 million be provided for maintenance of these anchorages.

These funds will provide for maintenance of the 40 foot project depth at Marcus Hook Anchorage and maintenance of the 37 foot constructed depth at Mantua Creek Anchorage. It has been our consistent plea for many years that the Mantua Creek Anchorage should be dredged to its authorized 40 foot depth over its presently constructed width. The Corps has not responded to this plea. It is requested that the Corps be directed to initiate action towards responding to our request for the 40 foot depth over the presently constructed dimensions so that the available anchorage depth will be compatible with the adjacent 40 foot channel.

Port Related Studies

Delaware River Camden Waterfront Project

The So~~uth~~ Jersey Port Corporation has spent over $10,000,000 on new port facilities which can accommodate vessels drawing up to 40 feet of water at berthside. The Camden Waterfront is an authorized project which has not been completed. Local pleas to the Corps of Engineers to complete this project to its authorized depth have repeatedly brought forth the advice that no work can be undertaken without completion of a restudy of the project which has now been underway for four years.

We urge that the Corps be directed to complete preconstruction engineering promptly so that construction of the full 37 foot authorized depth can proceed at the Camden Waterfront in the near future. We ask that $2 million be made available in FY'84 so that a significant construction start may be made on this project.

Schuylkill River

There is a $500,000,000 a year grain export business in Philadelphia near the mouth of the Schuylkill River where the authorized channel depth is 33 feet. Exporting of grain has become a growing business in the last several years which is of benefit to our farmers, to our foreign trade balance, and to our waterborne commerce. The Philadelphia grain facility is forced to use a 33 foot channel on the Schuylkill River whereas competitors enjoy 40 feet of water. One foot of draft can have an economic significance of $100,000 per trip in this trade. A 40 foot channel to the grain facility on the Schuylkill River would cost several million dollars and the benefits would appear to exceed the annual cost. Again the Corps response to our queries on this project over the last five years (approximately) has been a repetition that the studies underway have not been completed.

We urge that the Corps be directed to complete the Schuylkill River study in FY'84.

Disposal Study

Crucial to the continued maintenance of the Delaware River and its tributaries such as the Schuylkill River and Wilmington Harbor are the requirements for disposal areas to receive dredged material. These sites are dwindling in number as they become filled and five years ago the Corps initiated a study aimed at a solution for this pressing problem.

The disposal area problem is additionally complicated by the fact that there is increasing demand for the Corps of Engineers to relinquish disposal areas for local uses such as landfill. A case in point is that the Corps of Engineers is currently being asked to relinquish approximately 67 acres of disposal area in New Castle County, Delaware for use as a land fill for solid waste. We urge the Congress to prohibit the relinquishment of federally owned disposal areas for other uses unless a determination is made that the area no longer has any capacity for receipt of dredge spoil.

The Joint Executive Committee also urges the Congress to direct the Corps of Engineers to complete in FY'84 the disposal area study which has been underway for five years.

* * * * * * *

Our Delaware River ports are significant generators of federal revenues. During calendar year, 1982 customs receipts collected at our ports produced a record $281 million for the federal government. In turn the total federal expenditure for local navigation projects amounted to less than $30 million; insufficient to provide the depths of water mandated by federal law. Surely this vast return by the federal government on investment produces a hollow ring locally when we hear that the only way we can expect that our navigation projects will be properly funded requires that there be a local sharing in the cost of that maintenance in the form of user fees.

STATEMENT OF JOHN J. MCGARRY, VICE PRESIDENT, PENJERDEL COUNCIL

Introduction and Summary

FY-84 Funding of Navigation Projects of Interest to the Ports of Philadelphia

The PENJERDEL Council is a regional association of commerce, industry, and the professions with membership throughout the tri-state, Delaware Valley Area. The Council is concerned with the economic development of the Delaware Valley region which includes eleven counties in segments of three states, New Jersey, Pennsylvania and Delaware.

To conserve your time, I offer for the record the full testimony embodied in this statement, which provides background information to support our conclusions and recommendations.

Our primary concern is the fact that we have been suffering with inadequate maintenance of the Authorized 40' Channel. The Channel has been authorized for a 40' depth and there are billions of dollars worth of investments along the three-state waterfront which rely on the mandated 40' Channel. We urge that the Corps of Engineers be directed to do the proper level of Channel maintenance and the funds required therefore be provided.

We are further concerned that the President's budget contains no funds for the maintenance of the Delaware River Anchorages.

There is increasing demand for the Corps of Engineers to relinquish disposal areas for local uses such as landfill. A case in point is that the Corps of Engineers is being asked to relinquish approximately 75 acres of disposal area in the State of Delaware, to New Castle County for use as a landfill for solid waste. We urge the Committee to prohibit the relinquishment of disposal areas for other uses unless a determination is made that the area no longer has any capacity for receipt of dredge spoil.

Local interests have for approximately five years been attempting to get the Corps of Engineers to complete studies at the Camden, N.J. Waterfront and at the Schuylkill River in Philadelphia. We urge your assistance to obtain completion of these projects.

The industrial base of the whole Delaware Valley region depends on waterborne commerce, and from this base stems the economic activity that supports the region's economy. In 1982, the Port area handled 65 million tons of international waterborne commerce. Every ton of general cargo translates to about $40.00 in regional business activity. It is estimated that about one out of every three jobs in the PENJERDEL region is either directly or indirectly port related. These jobs produce port-generated wages and salaries approaching one billion dollars. Customs collections attributable to waterborne commerce were over 280 million in 1982.

May I say that on behalf of the PENJERDEL Council, we very much appreciate this opportunity to be heard.

Delaware River - Philadelphia to the Sea

Our primary concern is the fact that we have been suffering with inadequate maintenance of The Authorized 40' channel. This project supports the largest petroleum center on the east coast. The channel has been authorized for a 40 foot depth and their are billions of dollars worth of investments along the three state waterfront which rely on the mandated 40' channel. The 40' channel does not exist - 35' was more the rule - with depths in the channel depreciating to as low as 33' during the year. The inadequately maintained channel is restraining our commerce. We urge that the Corps of Engineers to be directed to do a proper level of channel maintenance and the funds required therefor be provided.

The South Jersey Port Corporation has completed a $10,000,000 expansion, the Philadelphia Port Corporation is undertaking a new $10,000,000 Port facility at Hog Island in Philadelphia: and the Holt Corporation is undertaking a new $25,000,000 port facility in Gloucester City, New Jersey. A new multimillion dollar roll on - roll off facility was constructed at Pennsauken, New Jersey in 1982 which provides scheduled weekly service to Puerto Rico and return. In short there is growth being provided by the private sector and these local endeavors need the support of the 40' mandated channel.

Local interests have for approximately five years been attempting to get the Corps of Engineers to complete studies at the Camden Waterfront and at the Schuylkill River. We urge your assistance to obtain completion on these projects.

Camden Waterfront - The South Jersey Port Corporation has spent over $10,000,000 on new port facilities which can accomodate vessels up to 40' in depth at their berths. The Camden Waterfront is an authorized project which has not been completed. Local pleas to the Corps of Engineers to complete this project has repeatedly brought forth the advice that no completion work can be undertaken without completion of a restudy of the project which is underway. This response has been received on this small work for over three years. We urge that the Corps be directed to complete their study promptly so that the full authorized depth will exist at the Camden Waterway, Delaware River, in the near future.

Schuylkill River

There is a $500,000,000 a year grain export business in Philadelphia near the mouth of the Schuylkill River where the authorized channel depth is 33'. Exporting of grain has become an increasing business in the last several years which is of benefit to our farmers, our foreign trade balance, and to our waterborne commerce. The Philadelphia Grain facility is forced to compete with a 33' channel on the Schuylkill River whereas competitors enjoy 40' of water. One foot of draft can have an economic significance of $100,000 per trip in this trade. A 40' channel to the grain facility on the Schuylkill River would cost several million dollars and the benefits would appear to multiply the annual costs. Again the Corps response to our querys on this project over the last five years (approximately) has been a repitition that the studies underway have not been completed. We urge that the Corps be directed to complete this study in FY 84.

Disposal Areas

Crucial to the continued maintenance of the Delaware River and its tributaries such as the Schuylkill River and Wilmington Harbor are the requirements for disposal areas to receive dredged material. In this connection Penjerdel Council urges that Congress direct the Corps of Engineers to complete in FY 84 the disposal area study which has been underway for five years.

There is increasing demand for the Corps of Engineers to relinquish disposal areas for local uses such as landfill. A case in point is that the Corps of Engineers is being asked to relinquish approximately 75 acres of disposal area in Delaware to New Castle County for use as a land fill for solid waste. We urge the committee to prohibit the relinquishment of disposal areas for other uses unless a determination is made that the area no longer has any capacity for receipt of dredge spoil.

Delaware River Anchorages

We are further concerned that the President's Budget contains no funds for the maintenance of Delaware River Anchorages.

The center of maximum waterborne commerce activity is at Philadelphia, Pennsylvania, Camden, New Jersey and Marcus Hook, Pennsylvania. These centers are served by the Mantua Creek and Marcus Hook Anchorages. It is not possible to safety sustain a high level of waterborne commerce without providing adequately "maintained anchorages". These anchorages are subject to steady shoaling and consistent maintenance is required to maintain reasonable depths.

PORTS OF PHILADELPHIA WITNESS LIST

Capt. Paul Lane Ives, Jr., chairman, Joint Executive Committee for the Improvement and Development of the Philadelphia Port Area (group spokesman).
Lewis Caccese, consultant to the Joint Executive Committee for the Improvement and Development of the Philadelphia Port Area.
William A. Harrison, secretary-treasurer, Joint Executive Committee for the Improvement and Development of the Philadelphia Port Area, and executive director, the Philadelphia Maritime Exchange.
Capt. Samuel M. Schellenger, chairman, Mariners' Advisory Committee.
James Kelly, president, Delaware River Port Authority.
John McGary, vice president, PENJERDEL Council.
Hon. Marvin Robinson, commissioner, Pennsylvania Navigation Commission.
Capt. Robert Bailey, president, Pilots' Association for the Bay and River Delaware.
Phillip Chaples, executive director, Port of Wilmington.
Robert Pettegrew, executive director, South Jersey Port Corp.
James Panyard, governmental affairs director, Philadelphia Port Corp.

LACK OF POLITICAL SUPPORT

Chairman HATFIELD. I am in one of those dilemmas this morning, because in our emergency jobs bill we just passed late last night, we had $164 million for operation and maintenance for the Corps projects, including a sizable amount for maintenance dredging. There was an amendment offered on the floor of the Senate to delete a major part of that, and most of the Senators from your area voted for the amendment which would have reduced this funding.

We made the case that we felt this was very important to navigation in this country. And the argument used by the people who represent you was that it was not usable, it was not capable of creating jobs.

Mr. IVES. I was not aware of that.

Chairman HATFIELD. So we have a difficult situation—fortunately, the amendment failed by a small majority, a vote of 45 to 51, a pretty close vote. So, we have a problem in trying to get these moneys out to those areas where there is a need and for which you have testified on today. The very people who represent you in the U.S. Senate do not appear to be strong supporters of these programs.

Mr. IVES. You are telling us we have more homework to do.

Chairman HATFIELD. Well, I am sort of being subtle about it, yes. [Laughter.]

Mr. IVES. We certainly thank you for your support.

Chairman HATFIELD. I just find that these are difficult times from a general budget point of view, and I need not tell you that, you are aware of the situation.

As chairman of the full Appropriations Committe, I struggle in terms of seeing that we try to allocate moneys over as broad a base as possible—reduced numbers of dollars to cover ever-increasing requirements. All of the reductions that the Congress has made, which you read about in newspapers, have been made primarily in discretionary, nondefense, and domestic areas.

So when they then attempt to focus on a specific target of money that is so important in supporting our infrastructure, which your programs represent a very significant part of that to this Nation, it is very difficult to find a balance from within as well as between the branches of government. We continuously get pressure from the executive branch for reductions, reductions, and more reductions that some of us think are important; but when we are standing doing battle on your behalf for these very programs, to have to face the opposition of the people elected to represent you, it makes it very difficult. So I appreciate your coming here today. I am aware of these projects; I have heard your testimony before, because I have presided over most of these meetings over the last year. But I think you should visit your Senators as well, very frankly, because I can tell you that those Senators that don't want money for some of these projects, there are plenty other Senators that want money and support these kinds of efforts. I don't want to force moneys upon any area if it is a matter of having to force money around or over or beyond the opposition of your own Senators. I can tell you we can use it on the Columbia River very easily, and we have unaminity out there regarding our needs for the Columbia River.

Mr. Ives. Well, Mr. Chairman, I will say we do enjoy a close relationship with our Senators; and on appropriation matters, we do keep them informed and we have had their support in the past. We didn't contact them on the jobs bill, and I must apologize, I don't know what went wrong on that.

Chairman Hatfield. I would be happy to show you the vote tally—this is my favorite list I carry around with me.

Mr. Ives. Well, unfortunately the lack of attention of just a few million dollars is going to cause reduction in Federal revenues of many million dollars when the ships are not able to bring these custom-bearing cargoes in.

Chairman Hatfield. I wonder if you have an estimate of the number of jobs that would be lost or impacted if the Delaware River navigation was stopped?

Mr. Ives. Yes, sir, I think we have those figures available.

Chairman Hatfield. Just for information, since I had to rebut the arguments that there was no job impact or very little job impact for this kind of money being expended in your area, I would like to know what your estimate is on the number of jobs lost if we didn't continue this maintenance work.

Mr. Ives. We will try to provide that information.

PREPARED STATEMENTS FOR THE RECORD

Chairman Hatfield. Thank you, gentlemen.

Before calling our last witness, I will include in the record statements sent in by the State of New York and the State of New Jersey.

[The statements follow:]

STATEMENT OF NEW YORK STATE

New York appreciates the opportunity to present its testimony on the Civil Works Program of the Corps of Engineers. The State has a long-standing commitment to cooperate with the various Federal agencies involved in a unified water resources program to meet the needs of the State. Coordination of this program by a single State agency, the NYS Department of Environmental Conservation has been successful in avoiding duplication and maximizing the total water resources effort in New York. We request the support of Congress so that we can implement our ongoing and emerging programs.

Water Supply

The most urgent water resource problems in the State are those that affect water supply systems. The reliability of our urban and rural water supply systems is of major concern. Deterioration and obsolescence are common to these old and antiquated systems and they are desperately in need of rehabilitation and upgrading. Routine operation and maintenance has been postponed for years. Now, we are faced with the need to start new life cycles for many of the systems, and the localities involved do not have the funding capabilities to do the work. Although New York and its localities are prepared to make commitments to water system rehabilitation and repair, current rates of interest limit borrowing.

Safe and reliable water supplies for public use are as important a national interest as agricultural water, recreation, navigation and flood control; all of these are subsidized and in some cases substantially. We believe it is essential for the Federal Government to recognize through its assistance programs that water supply for people is a necessity as a life supporting system and as a catalyst for economic development.

The Federal government must actively participate in the redevelopment and improvement of urban and rural water supply systems if we are to attain the properly functioning public utilities infrastructure that is essential to social and economic welfare. In this context, the Army Corps of Engineers has recommended continuing feasibility studies for the Hudson River Project Water Supply designed to serve the New York Metropolitan Area. The studies would reassess existing and future needs for water in light of the 1980-81 drought experience and other factors, examine environmental and water quality questions and review plans for New York City Water Tunnel No. 3. The FY 1984 Budget does not include any funds for the study. We urge that $500,000 be appropriated to initiate this work under the authority of the Northeastern United States Water Supply (NEWS) study (P.L. 89-298).

Section 214 Program

This program is not identified separately in the budget and, therefore, is not shown in the attached table showing additional funding needs.

The only Federal funds that are presently available to assess water supply problems in New York State are the Section 214 (P.L. 89-298)/Section 22 Program (P.L. 93-251). In recent years, these funds have been used primarily to investigate urban water supply system rehabilitation needs. The Section 214 studies show that deterioration of the water supply infrastructure in New York State is a critical problem with an estimated capital construction need of $15 billion. Other studies show that the problem is national in scope and must be resolved.

Governor Cuomo has made a commitment to restoring the State's vital water network by seeking the establishment of a State Water Finance Authority which could provide lower interest financing to localities to help them rehabilitate their deteriorating water systems. The technical assistance of the Corps of Engineers is vital to help these communities determine their needs. Currently, many of our water systems cannot account for as much as 50% of the water they produce.

The Section 214 Program works effectively because it allows for full cooperation among Federal, State and local interests in determining priorities and reconciling issues. Since the only Federal funds available for the water system rehabilitation studies has been through Section 214/Section 22 program, we urgently request that the Section 214 program funding be restored to the $500,000 level in FY 1984.

Lake Ontario Shoreline Study

The Corps budget does not include any funds for this study in FY 1984. We continue to support this reconnaissance effort on Lake Ontario and the St. Lawrence River which will provide alternative solutions for serious flood and erosion damage. We recommend the appropriation of $500,000 in FY 1984 for this purpose.

Genesee River Basin Study

The Corps budget does not include any funds for this study in FY 1984. The purpose of the study is to undertake a multi-purpose reconnaissance effort to determine the feasibility of providing 97 megawatts of hydroelectric power at an existing Corps project, as well as providing flood protection and mitigating streambank erosion in the Genesee River Basin. We support the funding of $100,000 in FY 1984 for this study.

Winter Navigation

New York State remains unequivocally opposed to any winter navigation season extension on the St. Lawrence River. The Chief of Engineers recommended to the Secretary of the Army that the report on Navigation Season Extension for the Great Lakes and St. Lawrence Seaway be transmitted to Congress for information, not authorization, and without filing an environmental impact statement. Also, the Chief of Engineers has stated that the Corps can implement winter navigation/season extension under its existing authority. We seriously question whether the Corps of Engineers has the existing authority to implement the project because of its complexity, critical impacts, and international and interstate consideration.

St. Lawrence River Additional Locks Study

The state's review of the Corps of Engineers' studies to date indicate that additional locks (any alternatives) are economically unfeasible and have the potential for substantial environmental damage. Also, the St. Lawrence locks are operating at only about 50 percent of capacity and the traffic has not increased in the last 16 years.

We continue to oppose Stage 3 funding (detailed planning) until Stage 2 studies (feasibility studies) for economic and environmental feasibility have been completed and proven to be favorable.

The study is not urgent and the costs for Stage 3 investigations are not justified. The Congress should not fund the Stage 3 studies and no further work should be considered until there is active Canadian involvement, the need for expansion is demonstrated through higher use of the existing locks, and adequate environmental studies have shown the project to be environmentally feasible.

Flood Control

Damaging floods occur in some portion of New York State virtually every year. Continuing flood losses serve to emphasize the serious problems facing many communities where Federal assistance is being sought. The proposed Civil Works Funding Assistance falls far short of the amount necessary to advance planning and construction for a number of feasible local flood protection projects.

Requests for increased levels of funding are discussed in the following paragraphs and summarized in the attached table. New York supports funding as proposed in the budget except as discussed in the following paragraphs and the table.

Ellicott Creek

This authorized flood control project is the most important flood control project in New York State. The State of New York has committed $1,400,000 for lands and relocations. The State strongly supports construction funding in the amount of $2 million for construction of the first segment of this project rather than the budget amount of $600,000 which will not complete the first segment.

Fire Island to Montauk Point Reformulation Study

Several years ago the Council on Environmental Quality required the Corps of Engineers to reformulate this proposed hurricane protection project. The Reformulation Study is in the fourth year with $5,000,000 allocated through December 1982. No funds are included in the FY 84 civil works budget request for continuation of this comprehensive and important study. Without completion of this study there can be no basis for future planning and project development. We are advised that $800,000 would complete development of alternatives. This study must be completed to this level of development for future planning efforts. It is recommended that $800,000 be included in the 1984 budget for a reasonable level of completion.

Dansville

No funds are included in the budget for this long delayed project. Funds were not included in the FY 83 budget due to New York's refusal to voluntarily agree to cost-sharing contrary to the traditional cost sharing established by the Congress. An appropriation of $150,000 is urged to initiate construction of this project.

Ardsley

Again, as last year no funds are included in the budget to initiate construction of this urgently needed project. The reason for exclusion of funds from the FY '83 budget was again a result of the cost-sharing disagreement. Funds in the amount of $500,000 are requested for this project.

Elmsford-Greenburgh

Although no funds are included in the budget request, it is urged that funds in the amount of $200,000 be appropriated for advanced engineering and design.

Westchester County Streams-Byram River

An appropriation of $740,000 rather than the budget amount of $250,000 is requested for continued planning and engineering of this project for the highly vulnerable communities of Port Chester, New York and Greenwich Connecticut.

South Ellenville

An appropriation of $100,000 is requested for surveys and planning of a needed flood control project in the Village of Ellenville.

Delaware River (Ice Jams)

The State of New York strongly supports the appropriation of $100,000 to study possible solutions to ice jam flooding problems in the tri-state area of the Delaware River.

Navigation

Port Ontario

No funds are included in the budget for construction of offshore protection for the Harbor of Refuge at Port Ontario. We urge an appropriation of $1 million for construction of this project and expect non-Federal funds to be available during Federal Fiscal Year 1984.

Moriches Inlet Navigation Project

The General Design Memorandum has been completed and recommends an inlet improvement project at a cost of $4,163,000. The project involved improving the channel through the inlet to the intercoastal canal and reconstruction of existing jetties and revetments. The Federal share of costs is is $2,185,000 to be invested over a two year period. It is recommended that $1,100,000 be included in the 1984 budget for a construction start.

Great Lakes to Hudson River Waterway

No funds are included in the budget for continuation of this study which began more than ten years ago. It is of great importance to New York that this study, whose results are expected to have a significant impact on the State Barge Canal System, be advanced to completion. We believe the Barge Canal System to be an important resource which will have a major role in the future energy policies of the Northeast. We urge appropriation of $150,000 for continuation of this study in FY 1984.

SHINNECOCK INLET

This project was authorized in 1960. The channel has become dangerous and the east revetment is in a state of failure. This inlet is important to the area economy and to the U.S. Coast Guard. It is recommended that $100,000 be included in the 1984 budget for design of repairs and improvements to this inlet.

STATEMENT OF ROBERT E. HUGHEY, COMMISSIONER NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

It has been brought to my attention that funds from the Energy and Water Budget may be available for use by the State of New Jersey for flood control at our Liberty State Park. Please consider this a request for an appropriation of $5 million for dredging and construction of a Seawall at Liberty State Park.

As you may know, in 1976 Congress authorized funding for a flood control project at Liberty State Park, which is located across from the Statue of Liberty. Although no federal funds have ever been appropriated for this purpose, the state has spent $7 million of its own. New Jersey is now seeking an appropriation in FY1984 to continue this work.

Background

Liberty State Park is a 750-acre recreational facility located on the banks of the Hudson River in Jersey City. This park, which opened in 1976, is the most heavily used in the state and provides an attraction for both national and international tourists. Over 1 million people visit the park annually.

In 1964, Jersey City donated 144 acres of abandoned railroad property to the State of New Jersey for the purpose of establishing the first urban state park. The area had been used as a dumping ground for trash, garbage and debris. The waterfront consisted of dilapidated piers, sagging bulkheads, and derelict vessels. It was not until 1958, however, when then-Commissioner, now Congressman Roe set aside $3 million from the first Green Acres bond issue, that cleanup and planning for the park began. A master plan for the total acreage was developed in 1977.

In order to secure the park from flooding and erosion, Congress authorized $12.6 million for the construction of a protective Seawall in the Water Resources and Development Act of 1976. The Seawall was to be built with the participation of the Corps of Engineers on a 70% federal, 30% state share. Despite this authorization, the state has never received federal funds.

Besides protecting the park from flooding and erosion, the Seawall will support what is to be called Liberty Walk, a promenade that will extend along the waterfront for over 1 1/2 miles. This promenade will connect the north and south embankments of the park, providing a magnificent view of the Statue of Liberty, Ellis Island and New York Harbor. The

National Park Service has given a high priority to the scheduled Centennial Celebration for the Statue of Liberty in 1986. The Liberty Walk could prove to be a priceless asset to that national celebration.

Funding of the Seawall

Because of the lack of federal funds, the state agreed in 1980 to complete the necessary dredging of the southern embankment at its own cost, without the promise of future reimbursement. This was completed at a cost of $1.5 million. And in 1981, to assure that the dredging work was not wasted, the state again agreed to advance $3.3 million for the first phase of construction. This phase of the Seawall is now completed. The Feasibility Study and plans and specifications for the whole project were another $2 million and are also now completed.

Phase II of the project consists of preparatory dredging on the northern embankment and then construction of a second section of the Seawall. The total cost of Phase II is $16.5 million, requiring a federal share of $11 million. The dredging will cost $9 million, and the actual construction will cost $7.5 million.

For FY1984 the state is requesting an appropriation of $5 million. This will allow the Corps to begin dredging. If it is begun in November of this year (the Corps permit stipulates that all work on the Seawall must be done between the months of November and April), it will be completed by April of 1984.

If actual construction begins in the summer of 1984, the Seawall can be completed by 1985. The final phase of the project is a set of bridges to connect the two Seawalls, constituting Liberty Walk. If everything goes as scheduled, this portion will be complete in 1985.

For additional review, I have enclosed further descriptive materials and a master plan. If your interest is stirred, I would be pleased to provide you and members of your Committee with a guided tour of this breathtaking facility. You will be amazed at the progress we have made in providing the residents of the New York Metropolitan area with a much needed recreational facility.

But we need your help to finish the job. I hope to receive a positive response to this request for an appropriation and to my invitation to come to Liberty State Park for a personal visit.

RETAINING LEVEE & PEDESTRIAN WALKWAY

LIBERTY STATE PARK

JERSEY CITY, NEW JERSEY

PROJECT DESCRIPTION

To provide a level of flood protection for the upland development of Liberty State Park by reconstructing the present irregular, deteriorated waterfront into a crescent-shaped shoreline consisting of stone armored levees and pile supported pedestrian bridges. A pedestrian promenade across the bridges and levee will constitute the easterly edge of Liberty State Park, overlooking Liberty and Ellis Islands.

PROJECT AUTHORIZATION

Water Resources Development Act of 1976 (PL 94-587)

LENGTH

Approximately 1.5 miles

CONFIGURATION

Crescent shaped along Upper New York Bay

BENEFITS

Flood protection/control
Waterfront stabilization
Access to Waterfront
Architectural feature of the Park design
Pedestrian link between North and South Embankments

RELATION TO NEW YORK HARBOR COLLECTION & REMOVAL OF DRIFT PROJECT

This program has been implemented to provide positive long-term improvements to navigation through the elimination of abandoned and deteriorated piers, vessels and related shore structures. The proposed project serves as a logical extension to the Harbor Cleanup Program.

ENGINEERING DESIGN CRITERIA

Plan consists of excavation, land fill, placement of an armored sand levee and construction of two pedestrian walkways spanning the unfilled area.

The sand levee with the stone protection designed to withstand dynamic forces which may be encountered during the 50 year project life.

Resist lateral forces of upland fill.

Provide 35" promenade at elevation 307.

Design should cause no significant changes in the water flow patterns surrounding the Park.

There shall be no detrimental hydraulic effects.

Must minimize displacement of underlying organic silt deposits.

MOST ECONOMICAL SOLUTION

Sand levee with stone face protection

ALTERNATE SOLUTIONS*

Sheet pile bulkhead
Cellular steel cofferdam bulkhead
Pile supported platforms
*All more costly than sand levee

CONSTRUCTION METHODS

Dredging of organic silts to firm bottom
Placement of sand fill in dredge area
Excavation
Placement of stone on face

ENVIRONMENTAL CONSIDERATIONS

The design of the retaining levee was, in part, the subject of a full environmental impact statement prepared by the U.S. Department of the Interior to meet the requirements of the National Environmental Policy (Final EIS published 3/78).

The current retaining levee concept has the support of the New Jersey Department of Environmental Protection. The U.S. Environmental Protection Agency, U.S. Department of the Interior, the National Marine Fisheries Service, the National Oceanic and Atmospheric Administration, and the Heritage Conservation and Recreation Services. The Department of Environmental Protection has taken the following steps to minimize the environmental effects of constructing the retaining levee:

1. Reducing Fill - the DEP has on several occasions reduced the total amount of fill. The original plan called for a fill area of 128 acres. This has now been reduced to 14.4 acres.
2. Wetland Preservation and Restoration - a 17 acre salt marsh (just north of the existing developed Park area) has been preserved, enhanced and designated as an environmental education area in the Park Master Plan.
3. Preservation of Northern Cove - originally planned as a fill area, this 15 acre cove (just south of CNJ Railroad Terminal) will be preserved for continued winter utilization by migratory waterfowl.
4. Upland Wildlife Habitat - the Master Plan for the "Greenpark" area will call for a massive planting of trees and shrubs to serve as an urban wildlife habitat for songbirds and small mammals.
5. Environmental Education Center - under construction.
6. Upland Disposal of Dredged Material - rather than pursue the common practice of disposing the dredged material in the ocean, committed to conducting a "demonstration" project of upland on-site disposal. The material will be air-dried and eventually used to contour the pastoral setting of the Greenpark. Although the cost will be substantially greater than conventional ocean dumping, the benefits to the marine environment will be manifold.
7. Value of the stone slope on the levee - the Division of Fish, Game and Shellfisheries conducted an extensive study to predict the value of the rock-face on the levee as replacement habitat. Many species of marine organisms like to attach themselves to a rock substrate. A new type of habitat will be created that will be both beneficial to the marine food chain and also provide shelter for young fish. Oysters, clams, crabs and barnacles should abound in this replacement habitat.
8. Fishing Nodes - opportunities for fishing and crabbing should steadily increase as water quality improves.

COST ESTIMATES

Area I South Peninsula - $2.7 million

Area II Middle Cove - $16.6 million

Area III Pedestrian Walkway (Wildlife Habitat) - $4.1 million

Area IV Pedestrian Walkway (North Cove) - $2.0 million

SCHEDULE FOR DEISGN AND CONSTRUCTION

Area I - under construction

Area II, III, and IV - design to be completed by October 1982

LIBERTY STATE PARK

Liberty State Park located on the Hudson River adjacent to Liberty and Ellis Islands is occupying an area of approximately 750 acres of land acquired over ten years with Green Acres bond funds. Most of this land was formerly owned by the railroads.

Liberty State Park will include recreational and cultural amenities that will attract millions of visitors each year. The major features of the Park will be:

A Crescent-Shaped Harborfront Promenade
South Embankment Development
Overlook
Marina
Wildlife Habitat
Historic Terminal Complex
Green Park
North Embankment Development
Environmental Education Center.

During the acquisition phase from 1964 through 1974 funding for planning or development was inadequate. Development at that time appeared to be an impossible task. The area was cluttered with every kind of trash, garbage, and debris. The waterfront consisted of dilapidated piers, sagging bulkheads, and derelict vessels. It was a dumping ground to be used by everyone in the region. All this created an unhealthy environmental mess; yet the potential was evident because of its location on the upper bay of our great Harbor.

In 1974, action was initiated for conceptual engineering design to stabilize the shoreline and to complete a master development plan. A Master Plan was adopted by the Department in November, 1977. A schematic design for a protective Seawall was completed. Besides protecting the Park from flooding and erosion, the Seawall will support what is to be called Liberty Walk, connecting the north and south areas of the Park.

From 1974 to 1982, the principle development consisted of cleanup of the site including the removal of old piers and structures that surrounded the Park on three sides. Some development for park recreation was provided at the South Embankment to include an overlook, picnic grove, administration building, and wildlife area. Restoration of the historic CRRNJ Terminal Complex now on the national register of historic places was initiated. The cleanup and demolition is now complete and the most important phase of development of the Park is about to begin.

In accordance with the funding requirements for the Master Plan development, Liberty State Park is estimated to cost approximately $160,000,000, and be completed in 1985. To date 63.6 million dollars have been invested in the acquisition and development of the Park as follows:

Acquisition - 22.7 million dollars

Planning, Design & Construction - 40.9 million dollars.

The most important aesthetic and principal feature at Liberty State Park will be Liberty Walk, a promenade to be constructed on the top of the Seawall. This promenade will extend along the waterfront for over one and one half miles. The protective Seawall is a necessity to secure the Park from flooding and erosion and it is for this reason that the Corps of Engineers is involved.

A permit for construction of the Seawall was submitted to the Corps of Engineers in 1975 and approved in January 1980. The Water Resources Development Act of 1976, P.L. 95-587 specifies that the Corps of Engineers is authorized to participate in the construction of the protective Seawall at Liberty State Park, New Jersey to be shared 70% Federal and 30% State. An appropriation has never been established.

A General Design Memorandum (GDM) has been completed by the New York District Corps of Engineers with the assistance of the State of New Jersey and the Port Authority of New York and New Jersey under contract with the State Treasurer. This GDM includes all of the essential physical and design features, economic and cost details, and construction schedule for the Seawall. The GDM estimates the cost of the Seawall at $25,380,000 which does not include design and supervision. The Seawall will be constructed in four phases over approximately three years. When the protective Seawall is completed the State at its own cost will refine the area with benches, lighting, and landscaping.

The Corps of Engineers agreed to begin the first phase of construction of the Seawall by October 1981 provided that the State, at our own cost, would complete the necessary dredging. The dredging contract is completed at a cost to the State of $1,426,000 for which we will receive no reimbursement. Also, the State agreed to advance funds for the first phase of construction.

The OMB in Washington has refused to appropriate funds to the Corps of Engineers for the Seawall mostly on the grounds that this is a new project and new projects have little or no consideration. The State contends that this project has been underway since 1976, and that over $2,500,000 has been committed on design and dredging to meet the Corps of Engineers specifications.

A contract has been awarded by the Corps of Engineers to Gates Construction Corporation, Little Ferry, New Jersey for Phase I Construction. The State of New Jersey has assigned $3,300,000 to the New York District Corps of Engineers for the construction and administration of this contract.

The future of Liberty State Park lies ahead. There are few projects, funded or pending, as outstanding, critically needed or exciting as Liberty State Park. This Park provides a link to America's culture and history through its proximity to the Statue of Liberty and Ellis Island, while at the same time, and for the first time, allowing access for the public to our great waterfront.

LIBERTY STATE PARK

SEAWALL

The most important aesthetic and principal feature at Liberty State Park will be Liberty Walk, a promenade to be constructed on the top of the Seawall. This promenade will extend along the waterfront for over one and one half miles. The protective Seawall is a necessity to secure the Park from flooding and erosion and it is for this reason that the Corps of Engineers is involved.

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Seawall will be constructed in four phases over approximately three years. When the protective Seawall is completed the State at its own cost will refine the area with benches, lighting, and landscaping.

The Corps of Engineers agreed to begin the first phase of construction of the Seawall by October 1981 provided that the State, at our own cost, would complete the necessary dredging. The dredging contract is completed at a cost to the State of $1,426,000 for which we will receive no reimbursement. Also, the State agreed to advance funds for the first phase of construction at an estimated cost of $2,500,000. Construction of this section of the Seawall is necessary regardless of whether the remaining phases of the Seawall are constructed as the South Peninsula needs this protection for the existing Park.

If the Corps of Engineers does not receive an appropriation, development of Phases II, III, IV can be held in abeyance. The State may choose to proceed with the construction of the Seawall with its own funds. This decision will require an additional $23,000,000 to complete the Seawall. The OMB in Washington has refused to appropriate funds to the Corps of Engineers for the Seawall mostly on the grounds that this is a new project and new projects have little or no consideration. The State contends that this project has been underway since 1976, and that over $2,500,000 has been committed on design and dredging to meet the Corps of Engineers specifications.

A contract has been awarded by the Corps of Engineers to Gates Construction Corporation, Little Ferry, New Jersey for Phase I Construction. Gates Construction Corporation submitted the low bid in the amount of $2,710,000. Site work should begin during April 1982 and will take approximately nine months to complete.

LETTER FROM JEROME J. MCCABE, EXECUTIVE DIRECTOR, LIBERTY STATE PARK PUBLIC ADVISORY COMMISSION

29 March 1982

Colonel Walter M. Smith, Jr.
District Engineer
U. S. Army Corps of Engineers
Room 2109
26 Federal Plaza
New York, NY 10278

Dear Colonel Smith:

The first phase of the Liberty State Park Seawall constuction is now under contract by the Corps of Engineers.

The firm of PRC Harris is working to complete the design for the remaining sections of the Seawall. Since there is a possibility of Federal funding, the State believes that it is necessary for the Corps of Engineers to review and comment on the preliminary design documents prepared by PRC Harris. These documents were submitted to the Corps of Engineers on 17 September 1981.

It would be appreciated and most helpful if your staff could review these documents at an early date. Thank you for your assistance in this matter.

Sincerely,

Jerome J. McCabe
Executive Director

MEMORANDUM FROM JEROME J. MCCABE, EXECUTIVE DIRECTOR, LIBERTY STATE PARK PUBLIC ADVISORY COMMISSION

TO: Commissioner Hughey

FROM: Jerome J. McCabe, Executive Director

SUBJECT: Seawall Construction - Phase I
Liberty State Park

DATE: 10 March 1982

On Thursday, 4 March 1982 the New York District Corps of Engineers opened bids for Phase I Construction of the Seawall, Liberty State Park.

The construction cost estimate was established at $2,500,000. The low bid was submitted by Gates Construction Company, Little Ferry, New Jersey at $2,710,000. The high bid was over $4,000,000.

If no protests are filed the contract will be awarded in approximately two weeks. It would be appropriate to hold a ground breaking ceremony at the Park when the contract is awarded. Everett Chasen, Public Affairs Officer for the New York District Corps of Engineers ,(212-264-9113) is prepared to participate in whatever arrangement the Department decides.

I will keep you advised on the schedule for an award date and any other information I may receive.

mm

cc: Deputy Commissioner Arbesman
Assistant Commissioner Fenske
L. Brennan

RANDLEMAN DAM, N.C.—OPPOSITION

STATEMENT OF KEMP DAVIS, CHAIRMAN, DEEP RIVER CITIZENS COALITION

Chairman HATFIELD. Our last witness is Mr. Timothy Swiggett.

Mr. DAVIS. Chairman Hatfield, I am Kemp Davis; I will be the speaker today for the Deep River Citizens Coalition.

I represent the citizens coalition. We represent a three-county area in North Carolina; we are now in opposition of the Randleman project. We also represent our county commissioners; we do have their representation. We have the host county; the land will be taken from our county to benefit a neighboring county which we feel we should not be asked to do.

BASIS OF OPPOSITION

There are several reasons for opposition, Mr. Chairman. Last year, the cost of this project was $159 million and in 1 year this cost has escalated to $177 million.

Now they have figured it will take them 10 or 15 years to construct that lake and, considering inflation, will cost a tremendous amount of money in the 10- to 15-year period. There are some hidden costs taken into consideration which are cost of preserving a water supply and an existing water reservoir that lay below the municipalities that it will benefit. We would ask you to delete funding for this lake.

I have heard many testify that they need money in other areas of the country, and we request this money that has been requested or has asked to be appropriated for this project, be applied to these places who need it worse than we do.

I would like to say that we have other organizations which do represent our cause: the National Wildlife Federation, our representative, Representative Andrews, has requested further studies be done before money is committed on this project. We will be speaking with him later.

There are several other reasons we oppose this project. Time should be taken before a project of this enormous size is constructed, to look at conservation methods in Greensboro and the county. Now they use 40 percent more than the national average. Conservation is more effective than building this massive reservoir.

Thus, by conserving 20 percent of the water capacity they have now, they could preserve 5 or 6 million gallons of water they have in their capacity today, which is a substantial amount of water.

LOSS OF AGRICULTURAL LAND

Also the loss of farmland which will be taken because of the building of the reservoir which will be taken out of the tax base in the county which is opposed to this project.

Now, in North Carolina in the last years there has been over a 1 million acre nonagriculture loss, and another 700,000 acres in the next 20 years. We think this is a substantial loss for the economy in North Carolina.

Now myself, I am a dairy farmer, I live in the impact area, so I have a definite need to be concerned with this.

SECONDARY PROJECT RELATED COSTS

Beside this we are talking about the first cost which is $177 million, but the other cost we don't think the Corps of Engineers has taken into consideration is secondary cost. That is piping the pumping, the treating of the water to the beneficial areas. These costs have not been considered. This could take up to $90 to $100 million more, and the citizens in these counties who were supposed to benefit from these reservoirs, are they willing to pay this amount of money, do they know they have to pay this amount of money?

We hope that you will take into consideration what we have said and thank you for this time. We need more time to consider funding this project and for the citizens to decide what kind of reservoir meets the needs and how much they are willing to pay.

Thank you.

Chairman HATFIELD. What is the position of the State of North Carolina on this project?

Mr. SWIGGETT. Right now they have mixed emotions. They have taken a stance as far as the reservoir itself, and are seemingly in favor, but they still have their doubts, because the final answer has caused a problem.

Chairman HATFIELD. So the State has taken no official position?

Mr. SWIGGETT. Not to my knowledge.

Chairman HATFIELD. Do you expect there will be one established?

Mr. SWIGGETT. The financial package for the project is in jeopardy.

Chairman HATFIELD. Do you know the position of your Senators?

Mr. SWIGGETT. Senator Helms felt this project has existed for so many years—we have tried to regenerate his interest, and that is what we are doing here today. As far as Senator East, we have had conferences with his aide and they did listen to what we said and they will tell that to Senator East, and we will talk to him later.

As far as their positions, we don't have it at this time.

Chairman HATFIELD. Thank you very much.

[The statements follow:]

STATEMENT OF KEMP DAVIS, CHAIRMAN, DEEP RIVER CITIZENS COALITION

WITNESS LIST

Mr. J. Kemp Davis, Chairman, Deep River Citizens Coalition
Route 1
Randleman, NC 27317

Mr. Thomas V. Osborne Jr., Guilford County Representative, DRCC
2615 David Caldwell Drive
Greensboro, NC 27400

Mr. Timothy J. Swiggett, Randolph County Representative, DRCC
Route 1, Box 328
Randleman, NC 27317

The Deep River Citizens Coalition, an organization of North Carolina taxpayers, landowners, and citizens concerned for the best use of our financial, natural, and human resources, requests that the $2.7 million dollars requested for the Randleman Dam Project not be appropriated by the Sub-committee on Energy and Natural Resources. The DRCC opposes funding of the Randleman Dam for the following reasons:

1. Tremendous cost - In 1982 the estimated cost of building the dam was $159 million; the most recent figure estimated by the Corps of Engineers is $177 million. This does not include the cost of operation, maintenance, or piping of the water.

2. Questionable benefit -

    (a) Flood control is no longer a great need, and the facility would only make 2.3 miles flood free down stream from the dam.
    (b) Recreation needs are being provided for with the present eight large reservoirs and recreation areas within an 80 mile radius of Randleman.
    (c) Water supply needs are questionable. Based on the 1980 Census figures, the Corps overestimated water demand for the year 2000 in Guilford County by 12 million gallons per day due to their inflated population projections. The cities of Greensboro and High Point can now supply sixty three million gallons a day from present sources but only use about half that amount.
    (d) Water quality presents a great concern. Because of the sewage, toxins, etc. which are dumped in the river, the water may be unfit for human consumption as has been the case with the water from the Jordan Lake in Chatam County, NC.

3. Excessive tax burden - Direct costs without interest exceed $78 million. Indirect costs for delivery and treatment systems may cost another $90 - $100 million. This tax burden is unacceptable to the citizens who live in this area and should not be imposed upon them by federal, state, or local governments, without further study and proof of need.

4. Alternatives - Local governments admit that alternatives have neither been thoroughly studied nor seriously pursued. Greensboro uses 40% more gallons of water per day per person than the national average. A moderate conservation program including patching leaks, making plumbing retrofits available, changing building codes, changing rate structures, and limiting street washing and lawn watering, could effectively reduce waste. Smaller reservoirs can be built as needed, reduce financing, and since they are closer to where they are needed, treatment and pumping costs are reduced.

5. Communities destroyed - This project will destroy several communities, including a black community where the people have lived on the land for several generations and feel that it will be impossible to relocate satisfactorily. The project will take 10,800 acres of land, move at least 600 residents from their homes, and flood 50 farms.

6. Protection of farmland - In North Carolina, 1.28 million acres of farmland were converted to other uses between 1967 and 1975. This area is already highly industrialized and green belts are becoming scarce. This should be considered and people should be allowed to live in a rural area if they choose to do so.

The Deep River Citizens Coalition is not alone in its desire to see the Randleman Dam deauthorized. The National Wildlife Federation, Cane Creek Association, The Haw River Assembly, etc. have issued statements non favorable to this project. Many of these people have been the victims of several similar projects and they know first hand, what injustices have been done through land acquisition and tax burdens that were placed upon the people.

According to the Courier Tribune, Asheboro, NC, Monday, November 1, 1982, Representative Ike Andrews, who represents this district, has indicated that he will not support the project as it now stands. His statement in that issue of the paper was, "I will resist further funding of the Randleman Project unless and until questions concerning this project be answered and resolved."

The Deep River Citizens Coalition respectfully asks that people's lives not be disrupted by relocation and unemployment until an in-depth study of the Randleman Dam Project has proven it beneficial, based on today's needs.

RANDLEMAN LAKE FACT SHEET

PROJECT DATA

Location: Randleman Lake, a reservoir project of the Army Corps of Engineers, would be constructed at mile 93.6 of the Deep River, 1.8 miles upstream from Randleman, NC, and at fifteen miles south of Greensboro, NC. The reservoir would cover acreage in Randolph and Guilford Counties.

Authorization: Flood Control Act of 1968.

Total Project Cost: $159 million.

Non-Federal Share (Direct):

Water supply	$62,850,000
Operation/Maintenance (50 years)....	15,570,000
Recreation	15,127,000
Operation/Maintenance (50 years)....	23,195,000
Flood Control	unknown
Operation/Maintenance (50 years)....	unknown

Interest Rate: 3.25%

Benefit/Cost Ratio: 1.4 to 1

Benefits:		
	Water Supply	56.7%
	Flood Control	6.6%
	Recreation	32.1%
	Redevelopment	4.6%
	Total	100.0%

Displacements: Acreage.....10,800 acres in 470 tracts
Residents...600 people

ANALYSIS

Flood Control. Flood damage reduction is 6.6% of the total project. Only 2.3 miles of downstream will be flood-free. The small amount of annual flood control benefits attest to the project's minimal downstream impact. No benefits will be realized along the Cape Fear. Alternative investment in flood plain management activities with the state's proposed financial cost for flood control of $3,657,000 will produce more flood damage reduction benefits over time.

Recreation. Recreational facilities at this project likely will attract a substantial number of visitors, but there are alternate lake locations in the region where the state could make investment. There are already eight large reservoirs within an 80-mile radius including the recently completed B. Everett Jordan Lake. Recreation facilities could be developed at one or more locations at a lower cost in dollars and land. The three recreation projects the state now operates on reservoirs recover only 26% of annual costs through park fees.

Water Supply. The dam would provide 48 million gallons per day of water storage to the cities of Greensboro, High Point, Jamestown, Archdale, Randleman, and Guilford County at a first cost of $62.85 million. Additional costs will be incurred for operation and maintenance, interest on investment, pumping costs, treatment facilities and delivery systems. The Corps overestmated water demand in the year 2000 in Guilford County by 12 million gallons per day by using inflated population projections. The Corps also overestimated demand in the year 2000 by using a per capita withdrawal rate that did not take into account water recycling by indudtry or water conservation progress. (Water withdrawal in Greensboro could be reduced by 6.6 million gallons per day by establishing a moderate conservation program.)

Loss of Agricultural Production. The project area produces 51 million pounds of milk annually, worth $3.5 million. The area also produces at least 270,000 chickens annually, worth $675,000. Total annual farm sales in the project area exceed $4.175 million.

Costs to State and Local Governments. Most local governments have expressed commitments only to keep open their options on water supply. Most Corps reservoirs in the past have had water supply included only as a minor benefit and a minor cost to the local community. This dam will require an investment likely to be far beyond the capability of these governments. Direct costs without interest exceed $78 million. Indirect costs for delivery and treatment systems may cost another $90-$100 million, according to local officials.

ALTERNATIVES. A moderate water conservation program will buy enough time for local communities to seek less expensive and more suitable non-federal water supplies. A flood plain management program would also provide significant downstream damage reductions. Recreation facilities may be developed at existing sites, particularly B. Everett Jordan Lake.

STATEMENT OF HAW RIVER ASSEMBLY, BYNUM, N.C.

Our main goal is the upgrading of the Haw River water quality. Another important goal is to create the sense of community in this watershed necessary to upgrade and maintain drinking quality water for the whole river basin. In the recent actions and considerations of the city of Greensboro, we see lack of consideration for these goals.

Greensboro has requested from the EPA a variance in the Metro Waste Treatment Plant design. The proposed change is the substitution of the approved and costly final solids filtration system with an on-demand polymer flocculation system. First, this alteration would make the new plant no better than existing plants except for its capacity. Second, the request is a further compromise of already questionably relaxed EPA standards. Third, the polymer system use is based on a threshold level of solids. When the solids reach this level (estimated to be 3-5% of the time) the system will be engaged. Even if the system works all the time, the admission of the sub-threshold level into the Haw should be discouraged. Fourth, as the waste treatment service area increases in population and in industrial discharge, the system will cost more to operate than the present operating projections admit.

The Randleman Dam proposal has several shortcomings. First, it uses federal funds via the Corp of Engineers to support local municipal growth. This tactic is questionable given the present economic considerations. Second, since the water is not neede for twenty years, there is time to consider less objectionable alternatives. Third, there appears to be an undeclared and unclear rapid growth policy. The Triad area is an acknowledged growth area without a clear policy, timetable, and land-use plan. Without such planning, dangerous pollution, increased service burdens on an insufficient tax rate, ensuing lack of services, and an increased tax burden will result. In short, the typical growth/tax accordian cycle will be instituted by short-sighted planning.

Fourth, the use of the Deep River water by Greensboro and its discharge into the Haw River will affect Deep River water quality and quantity. Fifth, recycling is being overlooked. It is the least expensive alternative, as well as the most sound with regards to water quality. London, England is the prime example of water re-use and a zero discharge policy. London's water comes from the Thames River. The water is used and discharged seven times in the length of frontage within the city use area. We encourage this example be followed by all cities. Finally, the proposed dam will flood working farms and long-time communities in the area. Is this good stewardship?

We recommend that before any plan is instituted, the residents of Region G do an inventory of and plan for area waste treatment needs and water resources. Civic and political leaders of Region G - source of the Haw River - should consider themselves as protectors of this great resource. We encourage them to pool their resources for a regional, long-term, comprehensive study of growth policy and resource protection.

LETTER FROM RICHARD D. PUGH, CHAIRMAN, RANDOLPH COUNTY (N.C.) BOARD OF COMMISSIONERS

MARCH 24, 1982.

Mr. WILLIAM R. GIANELLI,
Assistant Secretary of the Army for Civil Works,
Department of the Army,
Washington, D.C. 20310

DEAR MR. GIANELLI: This letter is to inform you of the decision made by the Randolph County Board of Commissioners to oppose the construction of the Randleman Lake project. At a special meeting held on March 22, we voted unanimously not to sign the proposed letter of intent and, additionally, to go on record as opposing the entire project.

It is the feeling of this board that in these economic times, considering current Federal deficits and the unnecessary amount of lands taken for recreational purposes, this project simply does not make economic sense. Changing growth patterns, local uncertainty regarding future water needs, and less than certain abilities to finance required expenditures all point to our ultimate decision. There are other alternatives. We feel these alternatives should be explored. They include: A single-purpose water supply, reduced expected needs, and a refinement of existing supplies.

Again, let me state that, absent real and substantive changes, we do and will oppose this project.

Sincerely,

RICHARD K. PUGH, CHAIRMAN,
Randolph County Board of Commissioners.

[The Greensboro Daily News, Thursday, Mar. 10, 1983]

COALITION: DAM CONTRACTS BLANK CHECK

By William March, staff writer

The Deep River Citizens coalition, a Randolph County group opposed to the Randleman Dam project, Wednesday accused the U.S. Army Corps of Engineers of trying to pull a fast one on local taxpayers to get the dam built regardless of its cost.

Untrue, a corps spokesman responded. Lawrence W. Saunders, planning chief for the corps in this region, said the dam opponents misinterpreted documents given to local governments about the dam.

But the whole episode underlined the uncertainty over the dam on which half a dozen local governments are counting to provide their water in the 21st century—how much it will cost, who will have to pay for it and when they'll have to put up the money.

At a press conference Wednesday in the Guilford County Courthouse, coalition spokesman Richard Petty, stock car racing champion and a Randolph County commissioner, said the corps is "trying to push the dam down our throats" while "not giving anybody any figures" on what it will cost.

In January, the corps sent state officials copies of proposed contracts between the Army and the local governments for the dam.

But the contracts aren't complete because no one knows yet how much the dam will cost or how it will be paid for. They have blank spaces where cost figures and payments by local governments should be.

Saunders said the corps sent out the contracts "to initiate negotiations" and "to get comments on the language," not for final action by the local governments.

And Greensboro City Manager Thomas Z. Osborne said the governments involved aren't going to sign anything until they see the bottom line.

But Kemp Davis, chairman of the coalition, charged that the contracts "give the corps the right to begin construction" with "basically a blank check" to pay for it.

"It's all local money, all coming out of our pocket," Petty added.

Saunders said the dam may cost as much as $118 million in 1982 prices, or $177 million with inflation over the 10-year construction period, if plans are not scaled down.

But for the local governments and the state, a more important question is how they'll pay their share, about half the total.

For years, the federal government financed such projects, giving favorable terms to local governments involved. But now the Reagan administration wants the local governments to pay their share up front, which would increase their cost sharply because of higher interest rates.

Petty and the other Randolph commissioners voted to back out of the deal partly because of the proposed change, which is being negotiated by Congress and the administration. Only Greensboro, High Point, Guilford County, Archdale, Jamestown and Randleman remain involved.

Osborne said he expects the negotiations will settle "somewhere in between" the old practice and the Reagan proposal. The corps' proposed contracts are based on the up-front cash financing, but Saunders said that could change depending on how the negotiations come out.

Meanwhile, Reagan's budget request to Congress for fiscal year 1984, which begins Oct. 1, includes $2.7 million for planning for the dam, and the present budget includes $8.2 million.

MANTEO (SHALLOWBAG) BAY, N.C.—OPPOSITION

Chairman HATFIELD. The subcommittee has received a statement from Mr. Ken Hunter on the Oregon Inlet deepening project in North Carolina that, without objection, will be incorporated at this point.

[The statement follows:]

STATEMENT OF KEN HUNTER, HARPERS FERRY, W. VA.

Now I would like to suggest to you a scenario that's a little different from the Army Corps of Engineers' economic development scenario for the Oregon Inlet jetty project. It might be called "How a Business Consultant Can Get Sued for Malpractice."

Let's assume a group of entrepreneurs shows up and reports they've just been down to North Carolina and the Army Corps has just built a pair of jetties at Oregon Inlet at a cost of maybe $100 million. And they've got a beautiful, stabilized channel that's 20 feet deep through the inlet now.

They say the sales rep at the seafood industrial park showed them Army Corps documents which "illustrate how we could harvest as much as 144,000,000 pounds of squid, hake, butterfish, sea herring and mackerel —because in the last year before the 200 mile limit was established, the foreigners (who had been fishing the hell out of the area) had caught 350,000,000 pounds of these so-called "nontraditional" fish —way out there in the ocean.

"And now that they've got these jetties at Oregon Inlet, the state of North Carolina is going to promote America's pioneering venture in fishing for squid. All we have to do is invest in building specialized processing plants and launch a fleet of oversized trawlers."

Now assume you are the Business Consultant. Would you tell them that if the Army Corps says it's so, then surely this has to be one of the most profitable ways to invest their money?

What would your liability be if they went ahead in reliance on your advice and only later learned the Army Corps had made "a little mistake?"

It turns out that the foreign catch actually was just 7 to 9,000,000 pounds in the waters off the North Carolina-southern Virginia coast. And the foreign catch was no more than 20,000,000 pounds within what the Corps had stipulated would be the practical commercial range of the boats operating from a land base inside Oregon Inlet.

Wouldn't a jury be likely to find that your now bankrupt entrepreneurs would have been better off investing in widgets?

Wouldn't you say the Army Corps should have reconsidered its economic justification for such a project BEFORE they built it.

Well, Assistant Secretary of the Army William R. Gianelli thought so. So did the Chief of Engineers. Mr. Gianelli explained to Senator East that the Corps had made "a fundamental error," and at the Chief's direction, the

Wilmington District last September was sent back to the drawing boards on this one. As I calculate it, their new try at coming up with an economic justification began about $400,000,000 below the break-even point.....and from a 0.34 to 1 benefit/cost ratio.

That's because the "squid scenario" constituted 70 percent of the package of "benefits."

The "squid scenario" —with its deeper draft vessels— was the ONLY reason ever cited by the Corps as to why a 20-foot deep channel would be needed through Oregon Inlet.

So what they said would happen doesn't look like it will.

And what they didn't think would happen has.

Of good, solid, American high value fish such as flounder, seatrout and croaker and other "traditional, domestic" species, the Corps said the area would have only annual catches of 22,500,000 even AFTER the jetties were built.

So what has happened? Without the jetties.....and without a channel that's even 14 feet deep most of the time.....and during the WINTER, primarily (when channel conditions would be the most difficult), the catches broke records in 1979 and 1980 and 1981. Landings for those years in Dare County totalled 35,000,000 and 41,000,000 and 39,000,000 pounds —almost DOUBLE the Corps' post-jetty construction predictions.

I submit that this productivity performance --in the face of marginal-to-poor channel conditions--suggests that a more aggressive dredging program should be implemented, and so it is gratifying to see the recommendation for more than $2,000,000 in dredging appropriations. That's a good bit more than in prior budgets. We urge the new District Engineer to use it well, including, specifically, issuing a contract for a hopper dredge.

While it would be splendid to have a perfect, permanent super-deep channel through the inlet that would not foul up the beaches of the adjacent segment of Cape Hatteras National Seashore and Pea Island National Wildlife Refuge, jetties probably would not be able to accomplish that any better than dredging.

Oregon Inlet is on the Outer Banks, America's classic barrier island system, and as explained in the text of my prepared statement and the statement of Dr. Orrin Pilkey, the Duke University geologist (who is the immediate past president of the North Carolina Academy of Science and the co-author of two books on the coast: The Beaches Are Moving and From Currituck to Calabash), costly heroics would be necessary to have any hope of getting what the jetties aim for in this system of shifting sand.

There would be high fiscal costs. There would be high environmental costs. And still the job might not be done.

A 20-foot deep channel through this barrier island inlet would be a large task. Fortunately the difficulty of effort required is exponential as you must strive for greater depths, and so a 14-foot objective --the present dredging authorization-- would be more manageable IF a more aggressive dredging approach to it were taken.

Right now a sidecasting dredge or two is the usual assignment to Oregon Inlet. Many of us are persuaded that a hopper dredge of the Atchafalaya class, deployed in the late summer or fall, should be able to establish a good channel that sidecasters could manage in serviceable condition through most winter fishing seasons. Undoubtedly exceptional storms will foul things up some winters, but the record-breaking productivity of the recent years suggests a channel could be managed at this level most of the time.

The Corps' Wilmington District staff has begun to put out the word that they expect to come up with a positive benefit/cost analysis for the jetties this time around, too. That --and its credibility-- remain to be seen.

A big part of this "rejustification" seems to be derived from a breathtaking cut in estimated costs of the project. Down from over $600,000,000 to about $350,000,000 for project life of 50 years.

This quarter-billion dollar cut in the estimate will come from major design modifications which surely must envision a considerably smaller project.

The Wilmington District should be commended if its new stripped-down $350,000,000 design is no more improbable in its ability to accomplish the project's mission than the old deluxe, $600,000,000 model.

But inasmuch as this cost-reducing design modification has occurred under the shadow of an imperiled benefit/cost ratio, it may be prudent to approach this with a dose of skepticism.

I shall close with some questions for your consideration:

- Are the design revisions more the product of an effort to salvage an economic "justification" than the product of solid engineering and scientific judgment?
- Is the new design a blueprint for getting the project started "on the cheap?"
- Will it result in a channel that will still be unsatisfactory?
- Will a cheap design lead to excessive operation and maintenance costs?
- Is it fraught with potential for major unanticipated post-construction modifications of incalculable cost?

Manteo (Shallowbag) Bay Project
at Oregon Inlet in North Carolina

Summary of Request:

I. The 1984 Energy and Water Development bill should appropriate $2,116,000 for operation and maintenance of the navigation channel through Oregon Inlet, as recommended in the Administration's Budget.

II. The bill should make no appropriation toward construction of the proposed jetties, as also recommended by the Administration.

Introduction

Oregon Inlet is in North Carolina. It is on the Outer Banks.

The Department of the Interior has well-documented concerns about the proposal to construct jetties at Oregon Inlet which forms the boundary between a segment of Cape Hatteras National Seashore and Pea Island National Wildlife Refuge. Last year Interior determined the south jetty would be incompatible with the wildlife refuge. Interior also reaffirmed a prior determination that the north jetty could not be permitted on the national seashore. An alternative to permits --a land exchange-- has been explored, but Interior recently advised that "given the national significance and resource values of the lands adjacent to Oregon Inlet, finding these lands 'suitable for disposal' (would be) a rigorous endeavor."

An Act of Congress probably would be required to clear the way for the jetties.

Fortunately such a divisive step is not the only way to achieve the mission of the project. Indeed, construction of the jetties would not even be the best way to achieve the objective.

I state this position knowing that three major interrelated announcements are pending at the Army Corps of Engineers' Wilmington District. These are:

- Major design modifications which will reduce estimated life cost by $250,000,000.
- A new economic analysis ordered by the Chief of Engineers following my investigation into what Assistant Secretary William R. Gianelli agreed was "a fundamental error" in the old analysis.

  (At stake are $500,000,000-worth of "benefits" claimed for an economic development scenario based on catching squid and other "nontraditional" fish. If, as my research indicates, this scheme is totally invalid, then the new economic analysis began with a 0.34 to 1 benefit/cost ratio and discovery of $400,000,000-worth of new benefits was required just to get back to the break-even point.)
- A study of the dredging alternative which was recommended in 1981 by Interior Secretary James Watt.

Thus, this statement is somewhat anticipatory.

The Objective

The real objective of the Oregon Inlet jetty project is a safe, navigable channel that can be used with reasonable reliability by the area's fishermen. If an effective dredging program could demonstrate this goal can be realized without building the jetties, the savings would be considerable --both for the short term and the long term.

So while the Administration's recommendation of more than $2 million is substantially greater than prior budget recommendations for dredging, it could be an important first step toward saving the taxpayer a bundle. How? By buying the first annual demonstration that the proposed jetties are not necessary, In contrast to construction and other project life costs of the jetties, an effective dredging program over 50 years could result in savings of hundreds of millions of dollars. As a bonus, adverse environmental consequences could be averted and the fishermen could have an improved channel as early as next winter --years before the jetties could be completed under even the most optimistic of circumstances.

Barrier Islands and the Inlet

All concerned agree this barrier island inlet confronts us with a difficult set of conditions, but, used strategically, the recommended appropriation is probably within range of what is required to dredge a serviceable channel through it.

It is important to recognize that Oregon Inlet is located on the Outer Banks of North Carolina, America's classic barrier island system. "Classic" here does not mean "typical." The Outer Banks are prime, even extreme, examples of a landform that has vexed the most determined of engineering efforts. Barrier islands can change overnight.....and over days. They surely shall change over years.....and over decades.

Oregon Inlet is a very dynamic feature of this changeable landform, and so when we talk about "an improvement" there --stabilization of the channel-- we must recognize that neither dredging nor jetties can be the "perfect" remedy. Exceptional storms are inevitable and will damage or ruin the best of channels. Even in the cycle of a more normal year's weather, the channel will have to be restored prior to each winter's important fishing season. So dredging admittedly will obtain imperfect results.

The Jetties

But jetties at Oregon Inlet would have far greater liabilities than dredging. Perhaps a "can do" spirit, reinforced by a psychological investment in the jetty plans, drives the Wilmington District staff to promote the structural solution. Whatever the origins of motivation, the District has time and again exhibited an excessive optimism that acknowledged weaknesses of the jetty proposal can be overcome. Other vulnerabilities are not even acknowledged.

There is widespread agreement among those who are knowledgable and have no vested interest in the project that no form of jetties could long maintain the stated objective --a stable, 20-foot deep channel-- without unplanned-for and costly heroics. There is virtual unanimity that the jetties would probably damage miles of public and private oceanfront.

Today the Wilmington District is close to announcement of major design modifications. We may expect a quarter-billion-dollar reduction in life cost estimate for the newly designed jetties. This breathtaking cut in costs comes after years of design work --and after the Wilmington District declared itself ready to begin construction with a plan that would have cost $600,000,000 over project life. (See the 1980 Phase II. General Design Memorandum.)

Clearly there will be substantial revisions and probably a complete re-working of the design. Tardy wisdom is preferable to permanent ignorance, and so the Wilmington District should be commended if its new stripped-down $350,000,000 design is no more improbable in its ability to accomplish the project's mission than the old deluxe, $600,000,000 model.

Nevertheless it would be like burying our heads in the shifting sands of the Outer Banks if we neglected to observe that the 1983 design revision is made in the context of an imperiled benefit/cost ratio. While it might be hoped that Wilmington actually has figured out how to have its jetties and at the same time spare the taxpayer an unnecessary $250,000,000 obligation, it may be prudent to approach this with a healthy dose of skepticism. Permit me to suggest a disturbing line of inquiry:

- Are the design revisions more the product of an effort to salvage an economic "justification" than the product of solid engineering and scientific judgment?
- Is the new design a blueprint for getting the project started "on the cheap?"
- Will it result in channel conditions that will still be unsatisfactory?
- Will a cheap design lead to excessive operation and maintenance costs?
- Is it fraught with potential for major unanticipated post-construction modifications of incalculable cost?

The Dredging Alternative

The Wilmington District underestimates the potential for dredging a serviceable channel through Oregon Inlet.

Record-breaking catches of fish were made in 1979, 1980 and 1981, with landings for Dare County totalling 35,000,000, 41,000,000 and 39,000,000 pounds. Primary species involved were flounder, seatrout, croaker and bluefish --high value species which trawlers brought through Oregon Inlet to the packing houses at Wanchese almost exclusively during the winter fishing season when channel conditions would be the most difficult.

The 40,000,000-pound level of the 1980, 1981 catch is noteworthy. It is almost double the 22,500,000 average catch of these and other traditionally caught species which the Corps predicted would take place after the jetties were built! (See the 1979 Post Authorization Change Report.)

This experience of a near boom has been occuring with a channel that reached its authorized 14-foot depth only about 25% of the time --and perhaps not at all during the winter. This productivity --achieved in spite of marginal-to-poor channel conditions which contributed to loss of some vessels-- suggests:

1) A more aggressive dredging program has real potential and should be implemented;

2) A 14-foot channel would be sufficient.

Note: The jetty project has been designed to achieve a 20-foot deep channel. Yet high productivity took place without jetties on the basis of a channel that usually runs less than 14 feet in depth!

There is a big difference between 14 and 20 feet. When you consider dredging a channel through a sandy barrier island inlet, the amount of effort (and cost) required to get and maintain 20-foot depths is exponentially greater than the effort required to obtain 14 feet. This may be conceptually difficult, but most any kid building sandcastles at the beach will be able to explain it. Jetties might be competitive with a dredging program aimed at achieving 20-foot depths, but the cost advantage shifts decisively toward dredging when a 14-foot objective is sought.

Today the Wilmington District is close to making public a study of the dredging alternative. As with the jetty design modifications, specifics are not yet available. Wilmington staff has told area fishermen, the press, the governor and probably members of congress that the study (based exclusively on models and primarily focused on trying to achieve a 20-foot channel) will show that dredging "won't work."

Contrast this with the letter the District Engineer sent just one year ago to the director of the Wanchese Seafood Industrial Park. Writing on April 1. 1982, Colonel Hughes said:

> "The suggestion to use a contract hopper dredge to enchance the channel at Oregon Inlet has been considered.....However, we feel that the Schweizer and Merritt combination can effectively open the bar channel to the extent that a sufficient channel will be constructed prior to the fall fishing season.
>
> ".....We are planning to have the bar channel sufficiently deep by the end of the summer to assure viable navigation throughout the following fall and winter fishing season."

The dredges referred to by Colonel Hughes are sidecasters. There have been many suggestions --including, I am told, a recommendation from the Corps' Coastal Engineering Research Center-- that a hopper dredge be brought in to determine from on site experience how it may perform.

The most recent call for deployment of a hopper dredge was made by the Department of the Interior on December 28, 1982. By letter from Assistant Secretary G. Ray Arnett to Army Assistant Secretary William R. Gianelli, Interior recommends the Corps:

> "Employ an Atchafalaya-class vessel (or similar plant capability) to establish a 14-ft. deep channel through Oregon Inlet as provided for in the 1960 project authorization.
>
> ".....The 14-ft. channel should be maintained until: ..... 2) there is a demonstrated need for deep-draft vessels to navigate the inlet for which a 14-ft. channel cannot provide safe navigation."

Wilmington has yet to exhibit any enthusiasm for using a hopper, and I am among those who question whether their reluctance is rooted in an unwillingness to permit an activity which might demonstrate that the jetties are not necessary. With more than $2 million available in F.Y. '84, perhaps the new District Engineer who takes command this summer will be more inclined to reach for what could prove to be the crucial key to effective management of the problems of the channel through Oregon Inlet. If he would act quickly, the first test of a hopper's capability could take place this fall.

When this is all over and done, I expect we shall see an annual dredging regimen in which a hopper dredge works during late summer or fall to prepare the channel for the winter fishing season. After the hopper does its job, sidecasting dredges usually will be able to keep the improved channel in serviceable condition until the next cycle.

At What Cost Permanence?

Proponents of the jetties often talk about achieving a permanent, stabilized channel. Assuming heroic efforts, there may be some theoretical hope of this, but the "benefits" necessary to justify such effort would far exceed anything that has been dreamed of to date. Realistically, the "ideal" will in all probability forever elude the best efforts of man at Oregon Inlet.

Unquestionably a dredged channel would not be permanent. Nor would it be "stable" on a season-to-season basis. As noted, changing conditions are practically the defining characteristic of barrier islands. Wouldn't the strategy that can best adjust to change hold the most promise?

Even apart for its substantially lesser costs, a program of dredging could prove to be more effective precisely because it is flexible, can be adapted to changed circumstances and does not aim for an impossible permanence. As long as the jetties remain on the drawing board, Wilmington planners may modify their design ad infinitum. But once built, fixed jetties will have limited potential for adaptability.

I am advised that financing may be one of the trickiest things about getting an effective dredging program implemented. The dredging budget is a visible target for cost cutting, and always is being squeezed. In this climate, some may see implacement of jetties as a more reliable assurance that a serviceable channel would be maintained over the years. Those who speak of the jetties securing a permanent channel may well have their fingers on something. If investment of $100,000,000± is made in jetty construction, then it becomes more probable that additional efforts will be undertaken as they become "necessary" --even though it throws good money after bad.

The anomalies of funding dredging projects are more the responsibility of policy makers and politicians than of scientists and engineers. If there is a problem that sets dredging at a funding disadvantage, then perhaps the members of the Energy and Water Development Subcommittee should be looked to for a better system.

Just because dredging may be a year-to-year, hand-to-mouth proposition is no reason to force the taxpayer to foot the bill for a more expensive, less suitable structural solution.

Sand Bypassing

If dredging programs are vulnerable to funding cutbacks, what stock should we put in assurances that the sand bypassing would be performed on an annual basis as outlined in the Phase II. General Design Memorandum? This operation --at $3,400,000 yearly-- is termed by the Corps to be "essential" to the jetties' success.

Dr. Douglas Inman's group and others are concerned that the sand bypassing system would not be adequate or effective. But apart from that, it seems sand bypassing would be a prime candidate for sacrifice to budgetary cutback directives. Wouldn't it be irresistably tempting to defer --or stretch out-- sand bypassing?

There are two reasons why the Corps said sand bypassing is "essential." One is navigational, the other environmental.

Without periodic sand bypassing, sand build-up against the side of one or both of the jetties eventually would flow around the jetty head and clog the channel. But before navigation would be interrupted seriously (requiring dredging between the jetties to restore the channel), the beaches down drift would be starved of their essential sand supply. The scientists say serious erosion of miles of beaches will result without at least annual sand bypassing, and either ineffective or too-long-deferred sand bypassing will cause erosion of disastrous proportions. Either an engineering or a political failure to provide effective and frequent sand bypassing will devastate not only beaches of Cape Hatteras National Seashore and, particularly, Pea Island National Wildlife Refuge, but also nearby beaches which front private, developed property as well.

The Economics

Assistant Secretary Gianelli explained in a letter to Senator East that the Corps had made "a fundamental error" in its old economic analysis. This resulted from findings I had made in the course of investigating the economic justification.

The Chief of Engineers directed the Wilmington District to do a new analysis, and it is expected to be completed soon. So we are in a transition phase where old details are almost moot and new details are not yet available. As for the old analysis:

- Seventy percent of the justification was based on harvest of squid and other so-called "nontraditional" fish.
- The central piece of data upon which the Corps relied for the "squid scenario" was erroneous. Foreign fleets did NOT catch anywhere near 350,000,000 pounds of these fish within two sectors of the ocean in 1976.
- In the primary sector off the North Carolina-to-mid-Virginia coast, the mobile foreign fleets caught only 7 to 9,000,000 pounds in 1976. (That was just prior to establishment of the 200-mile limit and the foreigners supposedly were "fishing the hell out of the resource.")
- Based on its wildly erroneous data, the Corps' "squid scenario" predicted an early productivity "spike," peaking at 144,000,000 pounds in 1993. This "spike" gave a tremendous lift to the benefit/cost ratio. (A productivity plateau of 70,000,000 pounds was predicted for the second half of the project's life.)

These migratory, low-value, pelagic fish are rarely present in anything approaching commercially viable quantities this far south. A land-based squid fishery on the North Carolina coast would be a sure way to lose money.

There is no way private capital is going to invest in specialized processing plants at the Wanchese Seafood Industrial Park to handle squid, hake, butterfish, mackerel and sea herring. This entire economic development scenario has to be thrown out. And that was 70% of the old benefits package.

That is why the new economic analysis started with a 0.34 to 1 benefit/cost ratio.

On top of that, the only reason ever cited for needing the 20-foot deep channel was accommodation of larger, deeper-draft trawlers envisioned as necessary to harvest these low-value nontraditional species. Thus, the 20-foot deep channel is irrelevant. A 14-foot deep channel would be sufficient, and that should be the objective.

As for the new economic analysis, Wilmington District staff have begun to assure the fishermen, the press and others that they expect the new benefit/cost ratio to come out positive. I have reviewed the fisheries data that is being used for the new analysis, and it will be interesting to see how far Wilmington's new study will go to stretch this new data. In addition, accounts in the press suggest the new economic analysis will entertain us with visions of a fleet of kitchen sinks sailing through Oregon Inlet.

My grandmother used to talk about "cooking up a mess of fish," and I can assure you the results were very good. The Corps is cooking-up something at Oregon Inlet..... but squid and the kitchen sink is a mess of a different kind.

Cutting A Cost Estimate In Half

PREVIEW OF WILMINGTON'S MAGICAL MYSTERY SHOW

A fiscal miracle soon will be revealed. The estimated $600,000,000-plus cost for the Oregon Inlet jetties is being cut almost in half by the Army Corps of Engineers. According to a reporter for National Public Radio's "All Things Considered," the Army Corps' Wilmington District expects its new economic analysis to project a 50-year life cost of about $350,000,000.

Specifics of this breathtaking cost reduction of a quarter of a billion dollars remain to be seen, but clearly there have been major design modifications which substantially cut down the jetties' size.

The Corps should be commended if its new stripped-down $350,000,000 design is no more improbable in its ability to accomplish the project's mission than the old deluxe, $600,000,000 model. Duke University geologist Orrin Pilkey, in a March 23 statement to a congressional subcommittee, says the jetties would be "a dinosaur type project, out of date and out of context with modern science and engineering."

Recall that back in 1980 the Corps' Wilmington District declared itself ready to begin construction of their $600,000,000 dinosaur? Surely it is wonderful that they now have figured out how to spare the taxpayer an unnecessary $250,000,000 zapping, but it may be prudent to approach this with a healthy dose of skepticism.

It would be like burying our heads in the shifting sands of the Outer Banks if we neglected to observe that the 1983 design revision is made in the shadow of an imperiled benefit/cost ratio. Permit me to suggest a disturbing line of inquiry:

- Are the design revisions more the product of an effort to salvage an economic "justification" than the product of solid engineering and scientific judgment?
- Is the new design a blueprint for getting the project started "on the cheap?"
- Will it lead to excessive operation and maintenance costs?
- Is it fraught with potential for major unanticipated post-construction modifications of incalculable cost?
- Will channel conditions still be unsatisfactory?

Let's set this in context.

Last year I documented what Army Assistant Secretary William R. Gianelli acknowledged was "a fundamental error" in the economic analysis which had supported the project, and the Corps' high command directed Wilmington District staff to do a new one. On September 30, 1982, Gianelli advised Senator John P. East:

> To be perfectly candid, this re-examination of the project's economics is an attempt by the Corps to re-establish a basis for proceeding with the project which, on the basis of the information now at hand, would not generate economic returns commensurate with its costs. In other words, only if the re-analysis can demonstrate the economic justification for the project as authorized or as a smaller scale investment will the Department be able to continue to support (it).

Wilmington has been engaged in a desperate salvage operation --"to reestablish a basis for proceeding"-- ever since.

It might be noted that long before I got involved, the project's benefit/cost ratio had fallen in stages from 1.40 to 1 down to a precarious 1.14 to 1.

At the 1.14 to 1 level, fully 70% of the value of all relevant "benefits" was to be derived from development of a so-called "nontraditional fishery" at Wanchese Seafood Industrial Park inside Oregon Inlet. While this seemed fishy to me, I never could have anticipated the dimensions of what my research was to uncover.

The Corps' "squid scenario" was based on wildly inaccurate data about the size of the fish resource.

The squid, hake, mackerel, butterfish and sea herring the Corps relied on were not present in amounts anywhere near what would be needed to attract investors. And it was investment of private capital in specialized processing plants and oversized trawlers at Wanchese that constitutes the lynchpin of the development scheme based on nontraditional fish.

While the Corps claimed foreign fleets had caught 350,000,000 pounds of squid and these other nontraditional species (not commonly found in American markets), official statistics showed the foreigners had caught no more than 20,000,000 pounds within what the Corps had stipulated to be the practical range of vessels operating from Wanchese. With trawlers servicing mobile factory ships, the foreigners followed the migrating fish and usually both stayed far to the north. If by operating from a land base, American fishermen were to make use of these fish, they would deploy from a Massachusetts harbor, not one on the North Carolina coast.

So even if the Corps achieved a splendid channel through Oregon Inlet, there was no way the prospective development would take place. The "squid scenario" had to be totally thrown out. Without it, the project was left with a 0.34 to 1 benefit/cost ratio.

This is how grim things looked to Wilmington in September: Almost $500,000,000-worth of "benefits' were at stake, and if the full thrust of my findings was sustained, then economic justification for the jetties was $400,000,000 short of the break-even point.

The monuments to the gods of engineering seemed on the verge of crumbling on the drawing board.

How fortunate, then, for the project's rejustification that the Wilmington District found itself able to slash $250,000,000 from the project's $600,000,000 life cost.

But the grand finale needs something more.

Hold on, now. What have we here? A load of kitchen sinks that have been lying around unnoticed all these years. Well now, what would you say these kitchen sinks are worth? $250,000,000?

Throw them onto the "benefits" side of the ledger. .....Abracadabra!

The jetties are once again "justified." Yes indeed, folks, it's a minor miracle in our own time!

Now if you'll just follow me into the next room, we'll discover how that lady in the magician's box gets sawed in half.

STATEMENT OF ORRIN H. PILKEY, PROFESSOR OF GEOLOGY, DUKE UNIVERSITY

I oppose construction of the Oregon Inlet jetties as does virtually the entire marine science community of North Carolina. I have co-authored a book on the North Carolina coast (From Currituck to Calabash, Duke Press), a second book on the American shore (The Beaches are Moving, Anchor Doubleday). I was a co-organizer of the 1981 "white paper" signed by 3/4 of the American Coastal Geology community which called for a major turnaround in management of American shorelines. I am immediate past president of the North Carolina Academy of Sciences.

The Oregon Inlet jetties are a unique shoreline project in the Corps of Engineers history because the project has been monitored so closely and continuously by the "outside" scientific community. The Park Service panel (the Inman Panel, named after its chairman considered by many to be the father of American Coastal Engineering) twice wrote reports condemming the project from an engineering, geologic and enviornmental viewpoint. At one point the North Carolina Academy of Science Board of Directors passed a resolution condemming the Corps for refusing to cooperate with the Park Service panel of scientists. In the following paragraphs I address a few major points that have recently been emphasized by the Wilmington District of the Corps of Engineers.

The Corps of Engineers Vicksburg facility has modeled the Oregon Inlet jetty system at a cost of well over a million dollars. The model is heavily relied upon to demonstrate jetty feasibility. Department of Interior scientists have criticized technical aspects of the model. More fundamentally however, it is my opinion that the model will prove to be a failure as have virtually all such models of open ocean shoreline structures. Models in a long term sense (5 to 50 years) can never take into account the many changing oceanographic variables. Foremost among the factors impossible to predict with a model is shape of the sea floor, changes in which strongly effect wave patterns. Models only give a very rough approximation of conditions in a year or so after construction.

The second largest economic benefit of Oregon Inlet jetties claimed by the Corps is that the present annual land loss of 8-1/2 acres due to inlet migration would be stopped by the jetties sand by-pass system. In the first place there is no land loss. Oregon Inlet has migrated over 2 miles since its inception. During that time the inlet has more or less maintained a constant width (except after storms). Land forms on the north side as it is lost on the south side. Thus land is not lost, it is simply exchanged from the south side to the north side.

Perhaps even more important is the fact that the Inman group as well as North Carolina geologists who have studied the area are in total agreement that the jetties will cause long range erosion down the length of Pea Island. It is impossible for me to comprehend how the Corps can claim a savings of 8-1/2 acres per year in the immediate vicinity of the jetties while ignoring the much larger probable loss of land to the south. The sand by-pass system, as pointed out by the Inman group, will not prevent erosion on adjacent islands. Sand by-pass systems work basically in fair weather conditions when only small amounts of sand are being moved about by the waves. During a storm the volume of sand moved in 24 hours may be equal to that moved in the previous several years. Such large volumes of sand would normally be transferred across the inlet to the adjacent upcoast or downcoast island. If the sand is stopped at the jetty, massive and rapid erosion will result on the adjacent island. Sand by-pass systems cannot move sand quickly enough to imitate storms. There is no question that the Oregon Inlet jetties will increase erosion rates and land loss both to the north and to the south.

If the channel is simply dredged major storms will still be able to pass sand across the inlet and major land loss on the islands may be averted.

There are a number of other oceanographic problems with the jetties part of, which have been discussed by the Inman panel. For example the constricting effect of the jetties may well cause new inlets to break through during future major storms. During the Ash Wednesday storm of 1962 the inlet expanded from 1/2 miles to 2 miles in 48 hours.

The scientific community is essentially unanimous in condemnation of the jetties. We are distressed at the poor quality of the geologic and oceanographic input into this project. Some of the models of barrier island evolution used in the design are 2 decades out of date. Even the engineering design (eg. foundation studies) appears to be lacking in thoroughness in spite of the past history of excellent engineering work of the Wilmington District of the Corps.

The dredging alternative is the strong preference of the scientific community. Whatever environmental damage may result in channel deepening it will likely be a fraction of the damage caused by jetties. It is important to note that only a 14 foot channel is needed, not 20 feet. A 14 foot channel is much easier to keep clear than a 20 footer. Rapidity of filling of channels increases exponentially with water depth.

Construction of major jetties on this inlet is a poor idea. It is a dinosaur type project; out of date and out of context with modern science and engineering. The damage caused by jetties to our shoreline nationwide is immense. In Texas 50% of the state's beach sand supply is tied up behind jetties and rapid erosion rates of shorelines (5-6 feet/year) are the rule. In some instances, jetties can be easily justified to protect major harbors. At Oregon Inlet, the plan is to build a truly major set of jetties for the benefit of a small fishing fleet. At Oregon Inlet, wave energy conditions are essentially the highest on the east coast of the U.S.

It will truly be a travesty to build such ill-conceived jetties and ill-designed jetties with such forced economic justification. North Carolina has one of the country's strongest and most effective coastal zone management policies. Jetty construction with the resulting shoreline damage and need for continued and costly repairs and maintenance is bucking the trend of an enlightened state's shoreline management.

I strongly urge the congress not to fund the Oregon Inlet jetty project.

STATEMENT OF GEORGE C. DEEMS, IMMEDIATE PAST PRESIDENT, NORTH CAROLINA BEACH BUGGY ASSOCIATION, INC.

The North Carolina Beach Buggy Association, Inc., Box 968, Nags Head, North Carolina 27959, is composed of 1,400 mobile sportsfishermen members. The Association is dedicated to preserving the natural resources of the coastal areas of North Carolina, and leadership in keeping beach access and surf fishing areas open for public use.

The North Carolina Beach Buggy Association opposes the construction of jetties at Oregon Inlet, North Carolina, by the Army Corps of Engineers, but supports the stabilization of the inlet by dredging.

The construction of jetties at Oregon Inlet, North Carolina, by the Army Corps of Engineers is also opposed by the following: North Carolina Wildlife Federation; United Mobile Sportsfishermen; National Parks & Conservation Association; United States Department of the Interior; North Carolina Academy of Science; National Audubon Society; Environmental Policy Center; National Taxpayers Association; National Wildlife Federation; Sierra Club; National Coalition for Marine Conservation; Outer Banks Preservation Association; and many other citizen groups.

The North Carolina Beach Buggy Association opposes the construction of jetties for many reasons -- some of which are:

COST/BENEFIT RATIO

Now standing at $0.34 to $1.00 -- extremely one-sided, in other words, the jetties would be built and maintained at a very great expense but producing very limited benefits -- a very poor investment of taxpayers' monies.

BEACH EROSION (From Inman Report)

"The jetties, as designed, will accelerate already high erosion rates adjacent to the inlet. South of the jetties, along Pea Island, this could lead to rapid beach and dune erosion, dune breaching, overwash, and associated flooding."

LOSS OF BEACHES

The entire beach north of Oregon Inlet on Bodie Island will be lost for a number of miles and additional beach on Pea Island will be lost forever for recreational use, not only for present but future generations. (See map attached.)

LOSS OF ECONOMIC INCOME

The loss of income to the area will be staggering for motels, gasoline stations, tackle shops and others. Many of our members have large investments in the businesses that will be affected. "The Army Corps of Engineers" own final supplement to the Final Environmental Impact Statement estimated that 80,000 to 100,000 annual visitors days are associated with surf fishing on the North End of Pea Island and South End of Bodie Island. The same report estimates annual visitation to the campground ranged from 60,000 to 75,000 camper days. The Army Corps of Engineers estimated a loss of 50% or 30,000 to 38,000 camper days. This was the estimate under the old jetty design. The new design wipes out everything. Lost forever!

EFFECT ON SHORELINE SOUTH (Inman Report)

"The barrier from Oregon Inlet south to Cape Hatteras is retreating at an average of 7 feet per year. It is of significance to note that the westerly retreat of the east shore of Hatteras Island near Buxton is less than the southerly accretion of the south shore of the island, confirming that the supply of sand for this barrier system comes from the north, and much of this is naturally bypassed from north to south around Oregon Inlet."

PERFORMANCE OF JETTIES

It is a well-known fact that the majority of jetties on the east coast have not performed satisfactorily. (You can't walk away from jetties after they are built.)

FISH SPAWNING (Inman Report)

Coastal experts believe that blue crab, panceid shrimp, spot, croakers, sea trout, channel bass and black drum may not be able to spawn in water off beach after the jetties are constructed. (Public Report) This could bring about a great loss to both sport and sound fishermen.

SMALL BOAT FISHING

During the construction of 3 to 4 years, the North Carolina Beach Buggy Association believes small boat fishing will be eliminated and greatly restricted after construction.

BOTTOM CORE TESTING

The Corps has never released this data. Rumors are that they found a deep layer of peatty mud.

CORPS PLANNING NOT ACCEPTABLE

This fact was brought to light by the Coastal Advisory Committee and the Oregon Inlet Technical Observation Committee reports.

FINAL ENVIRONMENTAL STATEMENT BY CORPS (see attached)

This statement clearly shows that the Corps misled many people.

ECONOMICS OF OREGON INLET

This report shows that much of the information used to justify the jetties was in error. This fact now admitted by Assistant Secretary of the Army (civil works) as follows in his letter of September 30, 1982 to Senator John East.

"The reason for this reanalysis contained a fundamental error which resulted in a substantial overstatement of the project benefits."

is that the 1975 economic analysis

INMAN REPORTS NO. 1 AND 2

These reports completed by five coastal scientists and engineers clearly state the possible dangers of building jetties at Oraton Inlet and that the Corps planning was in error.

COASTAL SCIENTISTS

Coastal scientists of three states including North Carolina oppose the construction of jetties. (They are not environmentalists.)

NORTH CAROLINA ACADEMY OF SCIENCE

This organization opposes the construction of jetties. (They are not environmentalists.)

COASTAL BARRIER RESOURCES ACT

Many believe that the jetties at Oregon Inlet would be completely at odds with both the spirit and intent of this new law.

COST OF DREDGING VERSUS CONSTRUCTION (Fifty year basis)

1. Estimated 50 years jetty cost - $600,000,000.
2. Estimated 50 years dredging @ $3,000,000 a year - $150,000,000.
3. Savings - - - - $450,000,000.

1. May be on low side.
2. May be on high side.
3. Could be as much as a half billion.

DREDGING ONLY ALTERNATIVE

The North Carolina Beach Buggy Association believes that a safe and adequate channel can be achieved by the Dredging Only Alternative Plan developed by the Army's own Coastal Engineering Research Center. Dredging to be carried out by split-hull hopper dredges.

We are informed that a hopper dredge will cost more to operate but one split-hull hopper dredge (with side doors) can move at least twice the volume of material a day than three (3) sidecaster dredges can dredge per day.

We are also informed that split-hull hopper dredges with side doors draw six feet when empty. Completely full the draw is fourteen feet. However, they do not need to be completely filled. Example: The Mermentan or the Atchafalaya.

The Corps listed approximately $4,000,000 a year for dredging after the jetties were constructed. The North Carolina Beach Buggy Association suggest that this amount or less would easily pay for dredging Oregon Inlet with hopper dredges.

SUMMARY

As the North Carolina Beach Buggy Association has stated many times, the Association supports a safe and adequate 14 foot channel through Oregon Inlet.

THE RECOMMENDATION IS THEREFORE MADE THAT FY 1984 BE ZEROED FOR CONSTRUCTION FUNDS, BUT CARRY ADEQUATE FUNDS FOR PROPER DREDGING WITH MODERN EQUIPMENT.

[From Current, March 24, 1983]

DON'T PLAY POLITICS WITH OREGON INLET, SENATOR HELMS SAYS

(EDITOR'S NOTE: The following letter from U.S. Sen. Jesse Helms, R-N.C., was addressed to W. Stanford White, chairman of the Dare County Oregon Inlet Commission. A copy was sent the Current from the senator's office.)

Dear Mr. White:

The surest way to kill all hope of solving the problems at Oregon Inlet would be to let this matter sink into the swamps of partisan politics. I will not play politics with the lives and property of the hard-working citizens of eastern North Carolina. But I sometimes wonder if this is not what some are trying to do.

I am disturbed by press accounts I have seen of the meeting that took place in my office when you and your colleagues from Dare County visited Washington. These accounts failed to mention, for example, that I offered to arrange a meeting in Washington, that I stressed the importance of having everyone—including Secretary Watt and Governor Hunt, present. You will recall that my offer was received warmly by the members of your group. I remember that Will Etheridge exclaimed: "That's the best idea I've heard."

I have noted reports that some insist that jetties are absolutely the only solution to the problem. While that may prove to be true, nobody yet knows it for sure. Right or wrong, experts at the Department of Interior believe intensive dredging can keep the inlet open. The Corps of Engineers is about to complete a study of an alternative dredging proposal. When it is finished, we will know whether intensive dredging would be feasible. But until then it would be imprudent for anyone to take an unyielding position on jetty construction, one way or the other.

Despite this, I have done my best to lay the groundwork for jetty construction—should that be the way all of us, working together, decide to go. Our biggest "sticking point" so far has been obtaining land for the Corps of Engineers to build the jetties on. I was not in Congress in 1970 when the Shallowbag Bay Project was authorized but I have studied the authorizing legislation. Unfortunately, it did not set aside land for jetty construction and that's why we are embroiled in controversy today.

Also, the authorization of 1970 did not clarify laws governing the Pea Island National Wildlife Refuge and the National Park. Previous administrations have not seen fit to make the necessary land available for jetty construction, and to date the present administration has taken the same position. But I have urged Secretary Watt to ask his lawyers to find some way for the necessary land to be made available.

Then there is the problem of cost. Congress is considering a budget for the next year that includes a deficit of roughly 200 billion dollars. There is no extra money; many projects are being scaled back, and others cancelled or delayed. I would be less than candid if I did not mention that getting the roughly $100 million for the jetties will not be easy. It may even be impossible, despite our best efforts. I believe anyone who has a suggestion for stabilizing the inlet ought to be prepared to include a suggestion as to how it could be financed. In other words, if you think getting land for jetty construction has been a problem, just wait until we try to get an appropriation of $100 million for the jetties. I'm not ruling out any funding possibility, and I would urge others to bear this problem in mind.

I have been and still am for establishment of a safe, navigable channel through Oregon Inlet as soon as possible by the best means available. That's what I've been working for. Accordingly, I have invited the following to meet in my office in April to see what we can work out together: Sen. John P. East, Congressman Walter B. Jones, Gov. James B. Hunt Jr., Interior Secretary James G. Watt, Assistant Secretary of the Army (Civil Works) William R. Gianelli, and perhaps others.

The meeting should not be held unless and until all the aforementioned agree to attend in person. I feel that anyone truly interested in solving the Oregon Inlet problem should be willing to set aside the time to come to this meeting. As we agreed at our recent meeting, it is absolutely essential that we all "sing from the same hymn book." I do not know what the outcome will be. But I can assure you one thing—I intend to continue to do everything I can to get things moving here in Washington. But resolving this problem will take more than that. I must have help from people in North Carolina. We simply must work together, free of any political inclinations.

I hope I can count on you, Governor Hunt, and others to lend a hand and help solve this very pressing problem. The people of Dare County deserve our support.

Sincerely,
Jesse Helms

[From Current, March 24, 1983]

INLET BOARD CONFIDENT OF HIGH-LEVEL MEETING

By LYNN McGOWAN

Members of the Dare County Oregon Inlet Commission say they are confident that a meeting of high-level federal and state authorities involved with the stabilization of Oregon Inlet will occur in mid-to-late April.

The meeting was suggested by U.S. Sen. Jesse Helms last month when he met with members of the inlet board in Washington. It would include Helms, U.S. Sen. John East, Congressman Walter Jones, Gov. James B. Hunt Jr., Assistant Army Secretary William R. Gianelli and Interior Secretary James Watt, as well as members of the inlet board.

"It was the senator's idea. He will chair the meeting and it probably will be in his quarters," said Buddy Davis of Wanchese, vice chairman of the inlet commission. Davis has been in frequent contact with Helms aide Clint Fuller in recent weeks about the meeting.

"The senator's office and the governor's office have been working closely with good cooperation on this matter," Davis said Wednesday. "We find that very encouraging."

Davis said he expects details of the meeting to be released from the senator's and governor's offices by early April.

Helms, in a letter last week to Oregon Inlet Commission Chairman W. Stanford White, said, "The surest way to kill all hope of solving the problems at Oregon Inlet would be to let this matter sink into the swamps of partisan politics. I will not play politics with the lives and property of the hardworking citizens of eastern North Carolina. But I sometimes wonder if that is not what some are trying to do." (The text of the senator's letter appears on Page 5 of this issue of the Current.)

Helms said he is "disturbed" by press accounts of his meeting with Oregon Inlet Commission members last month. "These accounts failed to mention...that I offered to arrange a meeting in Washington, that I stressed the importance of having everyone...present."

The senator emphasized that "nobody knows it for sure" that jetties are "absolutely the only solution to the problem" at Oregon Inlet. "Right or wrong, experts at the Department of Interior believe intensive dredging can keep the inlet open." He refers to the completion of a dredging alternative proposal, which is scheduled for release April 1, and says "it would be imprudent for anyone to take an unyielding position on jetty construction, one way or another" prior to the release of that study.

Helms says he has "done my best to lay the groundwork for jetty construction—should that be the way all of us, working together, decide to go." Referring to the Department of Interior's assertion that it has no authorization to issue special use permits for jetties, Helms said, "I have urged Secretary Watt to ask his lawyers to find some way for the necessary land to be made available."

Finding money to fund the jetties, if the land is made available, is still a problem, the Helms letter said. "I would be less than candid if I did not mention that getting the roughly $100 million for the jetties will not be easy. It may be impossible, despite our best efforts." He encouraged members of the inlet commission to "be prepared to include a suggestion as to how it could be financed."

The senator continued, "I have and still am for establishment of a safe, navigable channel through Oregon Inlet as soon as possible by the best means available."

The April meeting, the senator said, "should not be held unless all the aforementioned agree to attend in person. I feel that anyone truly interested in solving the Oregon Inlet problem should be willing to set aside the time to come to this meeting. As we agreed at our recent meeting, it is absolutely essential that we all 'sing from the same hymn book.'"

Members of the inlet commission Monday credited Elizabeth City attorney Hood Ellis with helping the board "get the ear" of Senator Helms on the inlet issue. "He's (Ellis) been working with fishermen in Wanchese on a regular basis and has been an enormous help to us so far," Davis said. Ellis reportedly has been asked by letter to serve as the commission's official linison to the senator's office.

"For the first time, we have both parties working together on this," White added. "We are a nonpartisan group, and they're proving they are, too, by helping us."

County Commissioner Orman Mann of Wanchese, an ex-officio member of the inlet board, also credited Texas oilman Walter Davis, who maintains a home in Dare County, with helping. "He's also discussed this matter with Senator Helms and a lot of people in Washington. I think we should thank him, too, and solicit his help in the future."

Robert Williams, director of the Wanchese Seafood Industrial Park and the governor's liaison to the inlet board, reported that an "impressive" state-level commission on Oregon Inlet is being formed, including members of the state's scientific community. Williams went to Raleigh Tuesday to meet with the governor and other state officials on the matter.

SUBCOMMITTEE RECESS

Chairman HATFIELD. Is there anyone else who wishes to comment or testify this morning?

[No response.]

Chairman HATFIELD. If not, we will stand in recess until 2 o'clock this afternoon.

[Whereupon, at 11:40 a.m. the subcommittee was recessed, to reconvene at 2 p.m. the same day.]

(AFTERNOON SESSION, 2:05 P.M., WEDNESDAY, MARCH 23, 1983)

NONDEPARTMENTAL WITNESSES

OPENING REMARKS

Senator COCHRAN [presiding]. The subcommittee will come to order.

I want to welcome everyone here on behalf of the chairman of our committee, Mark Hatfield, who was unable to be here and asked me to chair this hearing this afternoon.

I want to express our appreciation for the work each one of you has done in preparing written statements and testimony which is to be made a part of the hearing record. I know the members of the committee and the staff who will be working to develop a recommendation to the full committee will be very appreciative of the work that has been done by all of you to help us better understand the needs of these projects, the progress that has been made in the construction work that has been underway.

We do have a number of projects to review this afternoon, and I hope that the witnesses will be able to make brief summary statements from the written testimony which will, of course, be included in the full, and we will have time then for some questions and discussions of the issues before the committee.

TENNESSEE-TOMBIGBEE WATERWAY

STATEMENT OF HON. THAD COCHRAN, U.S. SENATOR FROM MISSISSIPPI

Senator COCHRAN. We first have before us today the Tennessee-Tombigbee Waterway Development Authority. I want to express again my strong support for the Tennessee-Tombigbee Waterway project, which is now nearing completion. I know the witnesses will bring us up to date on the progress made and, perhaps, take advantage of the opportunity to advise us of the economic importance to the region and to the entire Nation of the early completion of this important waterway facility. We have heard a lot of talk in recent months about the need to rebuild our infrastructure and, particularly, our transportation system. I believe this project will contribute to making water transportation more efficient and enable U.S. commodities to better compete in world markets.

I know we will have the benefit of the thoughts of the witnesses on these subjects and about some of the efforts that are being made to help assure that the Government's investment will result in a return, many times over—I am confident that it will one day prove to be one of the best investments the Government has made.

Without further comments from me, I would like to yield to Senator Stennis, who has been a leader in this committee for many years. This morning I had the opportunity of sharing a breakfast with Jamie Etheredge on the subject of agriculture before the Association of State Commissioners of Agriculture—many from our States were here—and James said in working together in agriculture with his memory and my energy, we were a good team.

Now he has got a lot of energy, too, to go along with that memory, and I have made the observation many times that you are one of the most energetic Senators here in Washington, and with your experience and leadership, you have made a very important contribution to the work of this committee and to the Senate.

Senator Stennis.

STATEMENT OF HON. JOHN C. STENNIS, U.S. SENATOR FROM MISSISSIPPI

Senator STENNIS. Well, Mr. Chairman, I thank you. We all enjoy coming in contact with many fine constituents, people of purpose, willing to plan, to take a chance, and I think you have outlined here—we are almost to the end of an era here, in putting this project together, carrying it out, a major investment by the Federal Government. I think you bring the focus on us in the area—Alabama and Mississippi—and the rest of the areas affected, even more so than ever before.

I have no doubt, allowing for some ups and downs, some delays, but I have no doubt that as the years come and go, it is going to be one of the great structures of its time, of the entire Nation, and thousands and thousands of people are living directly in development for the whole area in a big way, so it is another happy occasion.

We have come too far and worked too hard to turn back now. Our commitment to this investment is ready to start paying. I urge that you focus your efforts on planning for economic development which can be realized by the connection of the Tennessee, Ohio, and upper Mississippi River systems with the Gulf of Mexico. The enormous potential of this connection can spur the greatest regional development in the history of this Nation. The abundant natural energy resources—coal, lignite, natural gas, plentiful water—together with reliable electric power, an extensive network of railways and highways, and enormous expanses of virgin land, combine to make this America's new economic development frontier.

The construction pace has quickened and has made what was only a vision 10 years ago a reality. The need for moving on to the next step is urgent. I urge planning initiatives which will include both industry and community leaders. The possibilities for quality development which bring greater prosperity and a greater, fuller, higher quality of life are limitless.

Now, I will not take any more of your time, but we are going to see this thing through, we will not stop short of full project completion.

Senator COCHRAN. Senator, thank you.

I just noticed we have our two colleagues from Alabama, Senator Heflin and Senator Denton. We recognize you now for any comments you might have before we hear from our first panel witnesses from the Tennessee-Tombigbee Waterway Development Authority.

Senator Denton.

STATEMENT OF HON. JEREMIAH DENTON, U.S. SENATOR FROM ALABAMA

Senator DENTON. I want to defer to my senior colleague.

Senator HEFLIN. I want to catch my breath, so go ahead.

Senator DENTON. Thank you, Mr. Chairman, and members of the committee, thank you for the opportunity to appear here today. I want to acknowledge the work that the entire Alabama delegation has done, in particular Congressman Bevill, who has such an important part of this over on the House side. This is entirely bipartisan, and the support personally extends to different parties; and Senator Stennis has been of such great assistance to me and all of us.

As you know, I am committed to help all of us supporting this project. I brought Senator Abdnor and Senator Domenici down to Alabama to help persuade them personally of the need for this project and all of Alabama's waterways, including the Port of Mobile, the Alabama Coosa, and the tri-rivers system, and I continue to work with you on this.

I would like to emphasize one particular point that may not have been emphasized by anyone, I am sure someone else will have covered how close we are to completion, and that sort of thing, how little there is left to complete the vitally important waterway.

NATIONAL DEFENSE BENEFITS

I would like to highlight, just for a moment, the national defense aspects of our waterway system, recognizing the benefits of trade, which others will have covered, and also the employment improvement, which the waterways take care of now. It reduces unemployment now and will do that later when they are all completed.

In peace times it is easy, for Americans forget the role our waterways played during a wartime or national security situation, and give some examples of what happened during World War II with the existing waterways at that time, of which this will be such an important addition.

Our waterways made it possible to transport thousands of seagoing vessels to the sea from ingoing shipyards, made possible the widespread diffusion of the manufacturing industry that would have been forced to the coastal area, overburdening port systems for transferring cargo, from land bases to seagoing ships. It eased the burden on other forms of transportation by increased traffic related to wartime activity. The inland waterways made the difference between keeping plants in the Midwest open and operating at full speed. It provided fuel for our troops and citizens or having them immobile and freezing. And the difference between tanks and planes leaving our troops without air.

One of the most remarkable achievements was its very successful part of floating war vessels. The Army, Navy, and Maritime Administration found it imperative to provide for supplies and ordinance along our waterways. More than 4,000 vessels carried torpedos, coastal transports, auxillary repair ships, destroyer escorts, ocean-going cargo ships, floating cranes, and many other types of ships, boats, and craft, including submarines. In addition, 43,744 tons of structural ship sections were moved to shipyards by inland waterways.

In the case of any emergency, the best way to avoid war would be to prepare for it. Similar to those propensities, we developed waterways during World War II.

I will defer the rest of my speech to the request that it be included in the record, my written remarks, and ask that the remarks of Congressman Edwards and Congressman Dickinson, which I have, may also be incorporated in the record.

[The statements follow:]

STATEMENT OF SENATOR DENTON OF ALABAMA

Mr. Chairman, members of the committee, thank you for the opportunity to appear here today with my Alabama congressional colleagues and many friends from Alabama to testify in support of the administration's request for $90 million in continued appropriations for the construction of the Tennessee-Tombigbee Waterway.

Mr. Chairman, as you know, I am deeply committed to the project. With continued support from Congress, the Tennessee-Tombigbee will soon become a vital component of our national transportation system, helping to secure America's position as a leader in international trade and commerce. Equally important, the completion of the waterway will enhance America's national security interests. It is now and will increasingly become a strong factor in reducing unemployment.

Mr. Chairman, we have come a long way with the Tenn-Tom since construction began in 1972. The 232-mile-long waterway is a tribute to the resourcefulness and know-how of America. In the last 12 months alone, unprecedented progress has been made in construction of the waterway.

The entire project is now over two-thirds complete. More than 160 miles of navigational channel have been constructed, and the entire waterway is scheduled for completion in 1985. It is now open for limited navigation from Columbus, Miss., to Demopolis, Ala., where it joins the existing Warrior-Tombigbee Waterway leading to the Port of Mobile.

The completion of the Tennessee-Tombigbee will greatly enhance our prospects for intrastate, interstate, and international trade. The potential benefits of the Tenn-Tom are recognized by many authorities both in and out of government. For example, in a letter written to me by my good friend Bill Brock, the U.S. Trade Representative, he said: "I believe the Tennessee-Tombigbee project has the potential to provide important benefits for shipping interests and foreign commerce. This is especially important for U.S. coal exports and agriculture commodities. Increased shipping capacity on the Tennessee-Tombigbee can do much to encourage and facilitate international trade and to strengthen our national economy."

Mr. Chairman, that's a pretty good endorsement, and one that can be appreciated in these times when we need to do everything possible to strengthen our domestic economy.

I should add that completion of the Tenn-Tom will mean substantial contributions to our balance of payments, adding up to billions of dollars by the year 2000. Expanding world coal and grain markets alone offer great opportunity for the United States.

The benefits of trade, which would be reason enough for me to support the waterway, are not the only reasons our Nation should support the completion of the Tenn-Tom.

In peacetime, it is easy for Americans to forget the role our Nation's waterways played during World War II. Our waterways made it possible to transport thousands of seagoing vessels to the sea from inland shipyards; made possible the widespread geographical diffusion of essential manufacturing industries that otherwise would have been forced into the vulnerable and congested coastal areas, overburdening port systems for transferring cargo from land-based transport to seagoing ships; and eased the burden placed on other forms of transportation by increased traffic related to wartime activities.

The inland waterway system made the difference between keeping industrial plants on the eastern seaboard and Midwest open and operating at full speed or curtailing operations; of providing fuel for our troops and citizens or having them immobile and freezing; and of shipping tanks and planes, or leaving our troops without air and armor support.

One of the most remarkable wartime achievements of the inland waterway transportation industry was its very successful participation in the floating of war vessels from inland shipyards to the sea. The Army, Navy, Maritime Commission, and War Shipping Administration found it imperative to provide for supplies and ordnance along our navigable waterways. More than 4,000 vessels carried torpedo tenders, coastal transports, auxiliary repair shops, aircraft rescue vessels, destroyer escorts, ocean-going cargo ships, floating cranes, Coast Guard cutters, landing craft (infantry), tanks, patrol craft, subchasers, tank-landing ships, and submarines. In addition, 43,744 tons of structural ship sections were moved to shipyards by inland waterways.

The Tenn-Tom will add markedly to those defense propensities. Further, one of the most valuable commodities needed during a wartime or emergency situation is petroleum. The 232-mile-long Tennessee-Tombigbee is well suited for that commodity. During World War II, the waterways helped to make up for the loss in petroleum shipments caused by the withdrawal of other services and by the sinkings of coastline tankers.

Finally, Mr. Chairman, the Tenn-Tom means jobs. Currently, 5,000 people are employed in construction work and related activities on the waterway. In addition, about $41 million in subcontracts for waterway-related construction have been awarded to small and disadvantaged businesses in the waterway corridor.

A 1976 study by the Appalachian Regional Commission predicted that the Tenn-Tom Waterway alone will create about 136,000 new jobs in the four-State region that has one of the highest unemployment rates in the Nation.

Of even more importance is the fact that those jobs are related to major capital investments involving chemical, paper, and steel products.

In summary, Mr. Chairman, the United States has reached a point in its history where major decisions must be made—strategically to rebuild our security and economically in terms influencing both international trade and unemployment.

This is why President Reagan included $90 million in his fiscal year 1984 budget to keep the construction of the waterway on schedule. President Reagan and this administration want to do everything possible to see that the Tenn-Tom is completed.

To finish the project, which is nearly complete, would indeed be keeping faith with that commitment. To terminate a project in which $1.4 billion has been invested would be an unconscionable mishandling of taxpayers' dollars. What type of return on investment does this leave the American taxpayer?

It would be pennywise for Congress to continue support for the project by authorizing the appropriations needed to complete it. I think it would be Tom-foolish to terminate a project that will enhance our international trade, improve our national defense posture, and reduce both unemployment and our foreign trade deficit by as much as $60 million a year.

STATEMENT OF REPRESENTATIVE JACK EDWARDS OF ALABAMA

Mr. Chairman, thank you for giving me this opportunity to come before you to voice my strongest support for fiscal year 1984 appropriations for the Tennessee-Tombigbee Waterway.

The Tennessee-Tombigbee Waterway will flow through some of this nation's poorest counties before terminating at the Port of Mobile in my District. It will provide direct economic stimulus and jobs throughout its course. Already, the construction project has created some 5,000 jobs, most of which have gone to the unemployed or underemployed. Upon completion of the project, new jobs directly and indirectly related to the waterway will grow to about 135,000 by the year 2000. In the State of Alabama, approximately one job in eleven is directly or indirectly related to port activities. The Port of Mobile presently generates about $32 in revenues for every ton of general cargo, and tonnage is expected to double when the Tenn-Tom is completed. This growth will translate into substantial new jobs throughout the State. Alabama has already begun gearing up in anticipation of the Tenn-Tom's impact. In addition to the expenditure or allocation of some $99 million for highway and bridge replacements directly related to the waterway, the State has invested over $235 million in port expansion projects. Private industry in the Port of Mobile vicinity alone has invested about $1.6 billion in the construction of new industries and expansion of existing industry.

The Transportation benefits to be achieved by the Tennessee-Tombigbee Waterway are perhaps the most striking of the project's justifications. Transportation savings are anticipated to be $107 million in the first year of operation and the average saving over a fifty-year period will be about $135 million. These benefits will be accrued by 22 states. Coal will be the major user of the waterway and shipment cost savings for this one commodity will be significant. Other principal commodities include grain and other agricultural products, petroleum and petroleum products, chemical products, and metallic ore. New public and private inland dock facilities are being strategically located to handle those products. A number of these facilities will be equipped with grain elevators for handling agricultural products. Swine, poultry, and cattle feeder lot operators recognize the potential the waterway's opening will have on production increases to meet growing consumer demands. The Tenn-Tom's transportation efficiency will bring energy-related savings. It is estimated that over 9 million gallons of diesel fuel will be saved each year, enhancing the nation's ability to reduce its dependence on imported oil.

The Tennessee-Tombigbee Waterway also represents an important regional development project. The Tennessee-Tombigbee Corridor Study is being conducted to assess the economic impact on and needs of 51 counties in four states. The study will help these counties in planning for future development. Some of these counties are among the very poorest in the country. The study will be completed in 1984 and will make recommendations for the use of water and related land resources, for economic development, for the development of human and minority resources, and for the enhancement of environmental quality. The President has requested $628,000 to continue the study. I strongly support the study and urge approval of its funding.

Approximately 90% of the Tenn-Tom's navigation features will be completed by the end of fiscal year 1983. About 84% of the total project will be finished. Eight of the ten locks and dams are complete and the remaining two, Locks D and E, are more than 50% constructed. More than 180 miles of the 234-mile project are completed and navigation is open between Columbus, Mississippi, and the Port of Mobile. As of this past January, $1.53 billion of the estimated Federal project cost had been committed. The completion date for construction has been moved up by one year to September, 1985, and a total of $180 million is required during the next two fiscal years. But what if we were to terminate the Tenn-Tom? Well, it would cost $431 million to stop and mothball the project and it would cost $855 million to terminate it and restore the land to preconstruction condition. As construction has continued, the gap between the cost to complete and the cost to terminate has narrowed and now we find that it will, indeed, be far more expensive to the taxpayer to terminate the Tenn-Tom than it would to complete it. We have clearly gone too far with a worthwhile project to stop it now. Even those who question its worth must see that it is illogical to even consider termination.

Of the amount required to complete the project, for fiscal year 1984 the President has requested $90 million for construction of the Tennessee-Tombigbee Waterway. For ongoing operation and maintenance, $7.2 million has been requested. These funding levels are sufficient, and I urge the committee's approval of both the construction and O&M requests.

Mr. Chairman, I fully support this project and its full funding. I appreciate the chance to appear before you today in its behalf.

STATEMENT OF REPRESENTATIVE WILLIAM L. DICKINSON OF ALABAMA

Mr. Chairman, thank you for another opportunity to appear before you to add my voice of support for the Tennessee-Tombigbee Waterway.

It has been my honor and privilege to present testimony to support the Tenn-Tom almost every year since even before construction on the project actually began in 1972.

Construction work on the Tennessee-Tombigbee Waterway has progressed to a point where it is only two years from being open to through navigation. With over 85 percent of the construction money already committed, I foresee the time very soon when instead of discussing building costs, we can talk about actual benefits that the Nation will be receiving from the lower cost transportation route of Tenn-Tom.

Those benefits, which will ultimately translate into jobs, are not so far into the future anymore. In fact, we are already beginning to see the potential for benefits from the waterway.

The district I represent includes the Montgomery, Alabama area. Recently, the small port at Montgomery was designated as a Port of Entry in expectation of navigation on the Tenn-Tom in 1985. The first imported cargo was received in the new "international" port a few weeks ago. The cargo came from Spain aboard Seabee barges and part of it was sent further inland by other transportation modes. This initial entry in the import/export market is expected to be expanded in 1983 and further business connections made in 1984 to handle both import/export and domestic goods, part of which will include upbound and downbound shipments on Tenn-Tom.

At least 23 states will receive transportation benefits from TennTom when it is fully open to traffic. Fourteen of those states will realize an average annual transportation savings of over $127 million. The list of states includes almost all of Middle America--Alabama, Florida, Illinois, Indiana, Iowa, Kentucky, Louisiana, Minnesota, Mississippi, Ohio, Pennsylvania, Tennessee, and West Virginia. These savings will allow industries in all these states to become more productive and be more competitive in both the domestic and foreign markets. This will ultimately result in increased plant capacity and will generate and estimated 135,000 new jobs.

I ask your support for continued full funding so the present construction schedule can put this waterway into full operation by 1985.

Thank you.

ADDITIONAL PREPARED STATEMENTS BY MEMBERS OF CONGRESS

Senator STENNIS. All right Senator, without objection, the reference you make to the references from the Congressman of Alabama would be put in the record. I also have statements from Senator Ford and Congressmen Shelby of Alabama and Natcher of Kentucky.

[The statements follow:]

STATEMENT OF SENATOR WENDELL H. FORD OF KENTUCKY

Since my schedule does not permit me to appear before your hearing on March 23, I am writing to convey to you my strong support for the Tennessee-Tombigbee Waterway. The President's 1984 budget includes $90 million for completion of this project, a sum which would allow realization of a completion date of September 1985, a year earlier than originally envisioned. Right now the navigation features of the Tenn-Tom are about 85% complete, with 179 miles of the 234-mile waterway now open to navigation or essentially finished. Over $1.5 billion has been committed to its construction.

The Commonwealth of Kentucky is one of fourteen states that will benefit commercially from the completion of the Tennessee-Tombigbee. But equally as important to me is the fact that this waterway will promote the transportation of coal at cheaper costs.

With nearly one-third of the world's recoverable coal reserves, the United States will never be able to export its steam coal and help break the world's dependency upon oil unless we can greatly improve our inland transportation systems and port handling facilities. Our coal will never be able to compete for foreign markets as long as coal can be purchased more cheaply from Poland, Austrailia and South Africa.

When completed, the Tennessee-Tombigbee Waterway will provide a cheap alternate route for eastern-mined coal both to southeastern markets and for export through the Gulf of Mexico. By using the Tenn-Tom, coal shipments will be able to save from 400 to 800 miles in their journey. The Tenn-Tom will directly link our eastern coal fields with the Port of Mobile, Alabama, already the third leading exporter of coal. It is estimated that loading facilities now underway or planned will enable the Port to handle 20 million tons by 1990.

This is good news to an industry that is suffering from high unemployment and uncertain markets, for increased exports will generate new jobs for miners as well as additional jobs in coal-mining communities.

It is incumbent upon us to help our own economy and help lessen the world's dependence upon imported oil by promoting our most abundant energy resource, coal. Completion of the Tennessee-Tombigbee Waterway is a sure way to do this and I urge that the Subcommittee on Energy and Water Development recommend full funding of the President's budget request.

STATEMENT OF REPRESENTATIVE RICHARD C. SHELBY OF ALABAMA

Mr. Chairman, thank you for again giving me a chance to appear before you in support of the Tennessee-Tombigbee Waterway.

The President's budget for next year includes $90 million, an amount felt to be sufficient to maintain the currently estimated completion date of September 1985. The Continuing Resolution enacted for this year includes $186 million for the waterway. With these levels of funding and favorable construction scheduling, the Corps of Engineers has been able to advance the completion of the project by one year since they appeared before Congress last Spring. They are especially proud of this accomplishment since Government projects are seldom ever completed ahead of schedule.

As of January 1, 1983, the entire project was 76 percent completed with the navigational features alone about 84 percent completed. There are about 179 miles of the 234-mile waterway now open to navigation or essentially complete, with the remaining segments under active construction.

Coal and agricultural products are expected to be the major commodities moving down the waterway while chemicals and allied products and metallic ores are projected to comprise a majority of the commodities moving up the Tenn-Tom. Commerce on the waterway is expected to grow to 55 million tons well before the turn of the century with transportation cost savings reaching over $135 million annually.

However, the Tenn-Tom is much more than a navigation project. It is a regional economic development program for one of the most economically deprived sections of the nation. A study done for the Appalachian Regional Commission projects that the Tenn-Tom will cause the creation of as many as 135,000 jobs in a 167-county section of Alabama, Kentucky, Mississippi, and Tennessee by the year 2000.

This projection is in addition to normal growth which is to occur. The shorter route to new markets, availability of cheap water transportation, and the energy situation will result in extensive development along the waterway. Studies have shown this development will be primarily new business, not industry relocating from another area of the nation.

One excellent example of this is in Demopolis, Alabama, which is in my district. The Bergeron Barge Company has chosen this city to locate its multi-million dollar industry for the purpose of constructing steel river barges. According to William T. Bergeron, President, Demopolis was selected because of the "attractive labor force, its strong belief in the work ethic, and development of the Tennessee-Tombigbee Waterway."

The Port of Mobile's economic value to Alabama will escalate upon completion of the Tenn-Tom and it will play a prominent role in the movement of goods to the estimated 20 states that will use the waterway. A number of experts both in the U.S. and abroad support the contention among many Alabama economists that the Port of Mobile is destined to become one of the major coal handling ports in the world.

I believe the arguments favoring continued funding for the Tennessee-Tombigbee are stronger now than they have ever been. The Federal Government has already spent more than $1.5 billion on the project. According to the Corps of Engineers, the remaining cost to complete the waterway after FY 1983 is some $180 million, while the cost to place the project in "mothballs" would be $431 million.

The recent jobs bill passed in Congress provides work efforts for our nation's transportation system. It therefore strikes me as ironic that a concerted effort would be made to eliminate funding for a transportation project that is 80 percent complete, and in the process eliminate 5,000 jobs. Moreover, once the waterway is open to barge traffic from States throughout the South, East, and Midwest, the Corps of Engineers estimates it will generate benefits in excess of $127 million per year for the next 50 years.

Mr. Chairman, it would be a tragic mistake, both economically and environmentally to stop the Tennessee-Tombigbee Waterway project today before the full benefits can be realized. I am committed to the concept of a balanced budget. However, I feel that this expenditure is not a waste of government dollars; it is an investment in Alabama's and our nation's future.

Thank you Mr. Chairman and members of the Committee for the opportunity to appear before this distinguished committee on behalf of the Tennessee-Tombigbee Waterway.

STATEMENT OF REPRESENTATIVE WILLIAM H. NATCHER OF KENTUCKY

MR. CHAIRMAN, I want to thank you for the opportunity to once again express my support for the Tennessee-Tombigbee Waterway Project.

The Fiscal Year 1984 budget contains the sum of $90 million for the Project. As of January 1, 1983, the Project was 76 percent completed and navigational features about 84 percent completed. The entire Project for the purpose of commercial navigation is estimated to be completed in September, 1985, one year earlier than originally scheduled. Eight of the ten locks and dams are completed and two remaining locks are more than 50 percent completed. The Divide Cut is essentially completed with less than 2 million of the 155 million cubic yards of earth remaining to be excavated. 179 miles of the 234-mile waterway are at present open to navigation or essentially complete and the remaining segments under active construction.

As mandated by the Congress, the States of Alabama and Mississippi, along with local governments have completely met their requirements to the Project. State and local interests have spent more than $250 million in public port and related facilities to help accommodate commerce on the Waterway. In addition, public and private interests have active development proposals under consideration in Alabama, Florida, Kentucky, Mississippi and Tennessee in anticipation of completion of the Project.

The completed Tenn-Tom will connect some 16,000 miles of existing inland waterways now serving 22 states. Grain, coal, petroleum and chemical products moving to and from mid-America and the Gulf of Mexico will save more than 800 miles in distance traveled. Over 9 million gallons per year of diesel fuel will be saved by use of the Waterway. Fourteen states have already been identified as beneficiaries of the Waterway and during its first full year of operation, nearly 28 million tons of commerce will be transported to and from these states at a savings in costs of about $107 million. Coal will be the Waterway's principal commodity and its low cost transportation will help our Country's producers become competitive in foreign markets. Savings in transportation will average $135 million annually for a period of 50 years after the Waterway becomes operational.

Construction of the Waterway has boosted the area's economy as the Tenn-Tom corridor is one of the most economically depressed regions of our Nation. Nearly 5,000 construction-related jobs have been created and over 80 percent have gone to local workers who were unemployed or underemployed prior to construction of this Project. The Waterway has had a national impact on the construction industry with nearly $1.2 billion in contracts awarded so far to companies located in some 18 states. 135,000 new jobs are estimated to be created by the Year 2000 because cheaper transportation provided by the Waterway for the movement of bulk-type commodities will help increase productivity of the Nation's industries served by it.

MR. CHAIRMAN, the Tennessee-Tombigbee Waterway Project should be completed. It has been endorsed by five Presidents and is supported by industrialists, investors environmentalists and civic groups. I would like to request that the sum of $90 million be approved for this Project.

STATEMENT OF HON. HOWELL HEFLIN, U.S. SENATOR FROM ALABAMA

Senator STENNIS. Gentlemen, there is a vote on the Senate floor, but Senator Heflin, you have caught your breath, we will not give you a free ride, we want a good story, and anything you want to say about Tennessee-Tombigbee, unless you are going to go vote.

Senator HEFLIN. Inasmuch as I have a prepared statement, I would ask it be made a part of the record of the hearings. Also, since there is a vote on, I will not take too much time.

I would like to take this opportunity to commend the Tennessee-Tombigbee Waterway Development Authority, which has been ably led by Glover Wilkins over the years. I see a continuing future for that organization in the development of the Tennessee-Tombigbee after the project has been completed. I want to commend the great work that the authority, which is composed of five States that changed their constitutions, came together, and formed a joint compact in a joint effort to work on the Tennessee-Tombigbee Waterway. They have done a great job and I know they are looking forward to the completion of the

Tombigbee, but I believe the future will require the continued cooperation of those five States for the full development of the region.

At some later stage, I do want to talk further about this and make a speech on the floor of the Senate regarding the continuing role of the authority. But with this, I will cut my remarks short. Again, I would like to enter into the record not only my statement on the Tennessee-Tombigbee Waterway, but also on the Alabama Coosa River system, the Port of Mobile, the Warrior-Tombigbee Waterway, and the Tri-River Waterway. Thank you.

Senator Stennis. Thank you, Senator, those remarks will be put in the record at this point.

[The statement follows:]

STATEMENT OF SENATOR HEFLIN OF ALABAMA

ALABAMA WATERWAY PROJECTS

Mr. Chairman, as you and the other members of this committee know, I have a deep and abiding interest in the development of the water resources of Alabama and our Nation. I appreciate the opportunity to appear before you today and to join with other members of the Alabama congressional delegation, as well as with spokesmen from several Alabama River development associations, in support of funds for the continued and orderly development of the water resources of Alabama.

Because of your crowded agenda, my remarks will be brief. It would, I feel, be much more beneficial to this committee to receive the views and comments of those here today who have traveled great distances to present their cases to you in behalf of their respective waterway systems. Those who are here today are dedicated to the principle that the citizens of Alabama will realize and benefit from the vast potential of Alabama's rivers and streams. I warmly commend their testimonies to you.

Mr. Chairman, water is Alabama's richest and most abundant natural asset. Many, if not most, of the projects for which we are seeking funds will serve several purposes at once; namely, more and better economic opportunities, more and better public health and safety, more and better recreational opportunities, more jobs, and a better standard of living. Indeed, the overall quality of life in our State and elsewhere will be enhanced if we fund these projects and bring them to complete fruition.

We are most grateful to this committee for its interest in the full development of the water resources of Alabama. With your continued help, these extensive watersheds will return rich dividends to our citizens and will confirm the faith and high expectations of this committee.

TENNESSEE-TOMBIGBEE WATERWAY

Mr. Chairman, I commend the budget request in the amount of $90 million to continue construction of the great Tennessee-Tombigbee Waterway.

I continue to stand firm in my conviction that no project holds so much promise for the people of Alabama and our Nation as does the Tennessee-Tombigbee Waterway. And because I feel so strongly about the vital importance of this project to our citizens, I have been proud to stand shoulder to shoulder with other supporters of the waterway in the fight to make the project a reality.

You will receive detailed testimony today to the effect that the entire project is now more than 76-percent completed with the navigational features, alone, about 84-percent completed. We are now only 2 years away from opening the entire project to navigation. Funds to complete the project are now by far and away less than would be required to either mothball or terminate the waterway.

Simple economics alone dictates that funds be approved to complete the remaining segments of the Tennessee-Tombigbee project. I would hope that even the most vociferous doctrinaire opponents of the project will now realize that further attempts to either kill or delay the waterway would be economic folly. They would be guilty of sinfully wasting a major part of this Nation's future.

In addition to the request for construction funds for the Tennessee-Tombigbee Waterway, the budget also contains several other requests associated with the project, including $7,201,000 in operation and maintenance funds.

I would also like to call to the attention of the committee the recommendation of $1.4 million in construction funds for the Tombigbee River and tributaries. These funds are primarily for flood control improvements to Twenty-Mile Creek in Mississippi. This item is part of the channel clearing and rectification of 22 streams of the Tombigbee River in 9 counties in Mississippi and 6 counties in Alabama. A part of these moneys included in the budget estimate, specifically $295,000, will be directed toward the preparation of preconstruction planning for Luxapalila Creek, including that portion of the stream in Alabama. This project is very important to the citizens of Lamar and Fayette Counties, Ala., but has been held up in the Federal courts. There are, however, encouraging signs that the matter will soon be resolved so that the flood control work may go forward as originally contemplated.

Lastly, the budget contains a request in the amount of $628,000 to continue the Tennessee-Tombigbee corridor study. This study covers 51 counties, 18 of which are in Alabama. It is designed to assist these counties in capitalizing on the economic potential of the Tennessee-Tombigbee Waterway when the project is completed. With the drastic cutbacks in other Federal planning programs, this study is the only source of technical assistance being made available to some of these counties. In view of the benefits awaiting our citizens as a result of the development of the Tennessee-Tombigbee Waterway, I feel that it is sound economic policy to provide them with the know-how necessary to take advantage of the project.

I urge the committee to approve the budget requests for these items.

COOSA-ALABAMA RIVER SYSTEM

Mr. Chairman, I am happy to have this opportunity to speak in behalf of funds for the Coosa-Alabama Waterway. I strongly urge approval of moneys contained in the budget for the coming fiscal year for various projects associated with this mighty river basin.

The budget requests operation and maintenance funds in the amount of $15,832,000 for five major project areas along the Coosa-Alabama Waterway. These facilities and reaches on the river system must be maintained so that powerplant output and navigation will operate at peak efficiency. I might add that the Coosa-Alabama Improvement Association will seek to increase funding for certain of these projects. Their testimony will set forth the basis and justification for their request.

Mr. Chairman, navigation on the Alabama River from Mobile to Montgomery—a distance of 345 miles—became a reality a decade ago. We had hoped to be in a position this year to push for funds to extend navigation on the upstream portion of the Coosa-Alabama River system. In view of the recent status report on the navigation project submitted by the Army Engineers, however, economic reality dictates otherwise.

Hopefully, we shall be able to resume our pursuit of the improvement of the Coosa River for navigation when our overall economy improves. I have reviewed the status report and, in my opinion, the obstacles contained in the report are not insurmountable.

Last fall the President signed into law a bill to rename the Jones Bluff lock and dam on the Alabama River in honor of the late Dr. Robert F. Henry, who was the guiding force behind the development of the Coosa-Alabama River system for a quarter of a century. On May 28 of this year, I and other members of the Alabama congressional delegation will attend the formal ceremonies naming the Jones Bluff in honor of Dr. Henry. It was his dream and that of other farsighted men to make the entire river system navigable. I shall continue to do all in my power to make Dr. Henry's dream a reality.

WARRIOR-TOMBIGBEE WATERWAY AND MOBILE HARBOR

The President's budget for the 1984 fiscal year calls for $9,814,000 in operation and maintenance funds for the Warrior-Tombigbee River system and $3,893,000 for similar activities at the Mobile Harbor. The Port of Mobile is Alabama's only seaport and is one of the Nation's great natural harbors. The Port of Mobile is strategically located and for many years has ranked among the top 10 ports in the United States. There is also in the budget a request for $700,000 in survey money for Mobile Harbor. These funds will be used to continue planning and engineering activities for modification and improvement of Mobile Harbor.

Mr. Chairman, witnesses for the Warrior-Tombigbee Development Association will request the approval of additional funds to permit the continued planning and engineering effort directed toward the feasibility of replacing the lock at the William Bacon Oliver Dam on the Warrior River near Tuscaloosa. I endorse their request.

Ironically, the William Bacon Oliver lock and dam was the first structure constructed under the current modernization program which contemplated the construction of 5 new locks and dams to replace the original system of 17 dams and 18 locks with the exception of the uppermost structure in the system, namely, the John Hollis Bankhead lock and dam. Time and progress, however, have made the Oliver obsolete as evidenced by the chronic barge congestion at the lock whose dimensions are only 95 feet by 460 feet. A new lock with dimensions of 110 feet by 600 feet is badly needed if traffic on this busy river system is to continue unimpeded. Incidentally, the Army Engineers have completed their studies on the Oliver lock replacement and the appropriation of funds for the engineering and planning effort will go a long way toward getting the actual replacement work underway at the earliest possible date.

APALACHICOLA-CHATTAHOOCHEE-FLINT WATERWAY

Mr. Chairman, I have testified in years past in behalf of funds for the tri-rivers system. In my previous testimonies I have endeavored to stress upon the committee the severe navigation problems which exist on the system, particularly during periods of low river flow.

There is no doubt that this splendid river basin is ideal for economic growth, but commercial users of the waterway must have the assurance of navigation on a year-round basis. Unfortunately, disagreements concerning the full utilization of this waterway has hampered efforts to maintain the navigation channel at the authorized 9-foot depth throughout the entire year. The main obstacles to navigation are rock protrusions in the channel at locations in Alabama, Georgia, and Florida.

Although the ideal solution to the problem would be additional structural improvements, it does not appear that such action will be possible anytime soon. In the near future, representatives of the Governors of the States of Alabama, Georgia, and Florida will again meet in an effort to work out the issues in dispute associated with the problem of achieving the full project depth of 9 feet. I hope that agreement can be reached by the parties to the discussions.

The President's budget for the 1984 fiscal year calls for $4,050,000 in operation and maintenance funds for the tri-rivers system. Spokesmen for the Tri-Rivers Waterway Development Association will also testify before this committee today in behalf of these funds. They will also request the committee to approve $1,268,000 in unbudgeted funds to remove rock protrusions in the Apalachicola River channel. If memory serves me correctly, the House Appropriations Committee approved such moneys in the waterway money bill last year, but the funds were not included in the continuing resolution under which we are operating.

Mr. Chairman, navigation on the tri-rivers system on a 12-month basis is a must for the citizens of the river basin to be able to take their place in the economic growth of the Southeast and our Nation. I urge the committee to approve both the budget request for operation and maintenance funds and the request for additional funds needed to begin the quest toward maintaining the congressional authorized navigation channel.

Thank you.

INTRODUCTION OF GOVERNOR WINTER OF MISSISSIPPI

Senator STENNIS. I have said many times that if we had not been organized and structured, that and the personal views people put in there, their capabilities, Mr. Wilkins and others, that I doubt this project would have ever been carried forward and completed. It would suit me well if something is worked out for continuing service of this authority.

Now we are moving right along gentlemen. It is a special pleasure of mine to welcome the Governor of Mississippi, the Honorable William Winter, who is our next witness. He is well known in circles where projects are being planned and built and in getting one or two to pay for them; he is known well in that respect.

Governor, you always contribute well when you come here. We are glad to have you, and this project needs your continued support. We will be glad to have you make a statement as you see fit.

TENNESSEE-TOMBIGBEE WATERWAY

STATEMENT OF GOV. WILLIAM WINTER OF MISSISSIPPI, CHAIRMAN, TENNESSEE-TOMBIGBEE WATERWAY DEVEOLPMENT AUTHORITY

Governor WINTER. Senator I will be brief. Thank you for your great leadership and support of this project. Without your leadership, this project would not have come to fulfillment. As my Senator, I want to express the special appreciation which I feel from the people of our region.

I want the record to reflect the presence—and I will not attempt to introduce everyone—but I want the record to reflect the presence of a substantial number of members of the Tennessee-Tombigbee Authority, and I would like to ask them to stand at this time, if they will.

[Large group standing.]

Senator STENNIS. Ladies and gentlemen, you certainly have a word of welcome, and if that is the kind of support it takes, you certainly have come through. The whole area owes you a great debt of gratitude.

Gentlemen, I am advised they are cutting the vote time short, so if I am going to get to vote at all on this matter, I had better go. We will be in suspension, and I am sure Senator Cochran will be back in just a short time.

We are glad to have the Lieutenant Governor of Alabama, Bill Baxley from Birmingham, Ala. We have read a lot of good things about that great city; we love you folks in our sister State. The only complaint I have, whoever ran that line dividing Alabama and Mississippi, we would have liked to have Mobile. [Laughter.]

We are glad to have you here and I want to give you that word of welcome, and Senator Cochran will be back shortly.

[A brief recess was taken.]

Senator COCHRAN [presiding]. The hearing will come to order. We will continue now with Governor Winter—you may proceed.

Governor WINTER. Let me thank you for the courtesy extended to us today and also for your support of the project here, and I would say to you what I just said to Senator Stennis, that without the leadership that you and he provided here in the U.S. Senate, this project would not be in the stages of completion that it is now in—we are grateful to you, and it is more than a regional interest, it is a national interest.

Just before your return I had presented the members of the Tennessee-Tombigbee Authority. I would also like now to present some good fellow Mississippians, constituents of yours and mine, who represent the board of the Tombigbee River Valley Water Management, Mr. Larry Otis——

Senator COCHRAN. Would you stand?

Governor WINTER. Mr. Steve Meghorn, Mr. Robert Calvert from West Point, and Mr. Bastite, Mr. Mike Sullivan, Mr. Charles Gower, and Mr. Jimmy Miles. If these gentlemen would all stand, I think it is indicative of their interest in this project for them to come here today, Mr. Chairman, to participate in this hearing.

Mr. Chairman, I have a prepared statement that I would like to present for the record. I will make only some brief additional comments. I have appeared here as Governor of Mississippi and today as the Chairman of the Tennessee-Tombigbee Authority on other occasions.

Two years ago and one year ago, I came and testified concerning what I perceive to be the great damage that would accrue to our State if the waterway were not completed. The environmental disaster that would be created, the raw scar across our State.

I come here today with a different presentation. That raw scar has now been converted into the almost completed project, 98-percent completed project. With the excavation virtually complete, with the locks and dams virtually complete, with the structures in place, it now is at a point where we can talk about how we are going to realize maximum return from that rather considerable investment of the revenue of the people of this country.

I feel that what we are talking about here in completing the Tennessee-Tombigbee Waterway is the same thing that you are concerned about here in the Congress today. In creating new jobs, new productive opportunities for this country, for the opening up of new markets, international markets, and for the building of the infrastructure that is essential for this country to be competitive in this world, that is what the Tennessee-Tombigbee Waterway is all about.

REGIONAL ECONOMIC DEVELOPMENT

We are in the process in the local areas, in the States where this exists, of doing things that we will take advantage of. We have created the Tennessee-Tombigbee Waterway Area Council. This is a group of citizens and local political leaders who are working together to coordinate the economic development of the area; to make sure that the people living in the area are going to have improved job opportunities as a result of the completion of the Waterway, that we can coordinate the other transportation facilities in the area. There has been an adversary relationship generating and I am not sure how it came about, but it was between the railroads, some of the railroads, and those of us interested in building the waterway. There is no reason for that. We want to bring the railroads in on a totally cooperative basis, the highways, the other transportation facilities, so that we will have here in place the kind of structure that can develop in our area.

We are also concerned about developing foreign trade opportunities, and we will have testimony in a few minutes from representative of the great coal-producing areas of this country.

This waterway is one of the keys, in my opinion, to enable us to move the products of our mines, the products of our farms and fields and of our factories to markets more economically than before. This is a part of the processes of being competitive with foreign markets, the marketing of our products. We have created, we are in the process of establishing a group headed by the distinguished publisher of the Mobile Press, Mr. Hearin, who I am sure you know, Mr. Chairman, to provide this sort of coordination.

This waterway represents a major investment by the people of the United States. They have a right, the taxpayers of this country have a right to see to it now that we have a maximum return. We have invested their money and we want to see to it they get their money's worth.

I am confident with the planning that is going into this now, with the completion of the waterway almost assured, that when those first parties start moving all the way down through it, that we will have in place the kind of structure that will enable us to get maximum return.

You are going to hear from a representative of minority business interests, and they have a right to expect maximum returns from this effort. We are doing all these things now, so that when the waterway is completed, we will not lose any time in developing a profitable return that I expect to have from it, and I want to thank you again, Mr. Chairman, for the leadership you have provided in enabling us to get this great additional productive facility available to the people of the United States.

Senator COCHRAN. Thank you for that excellent testimony Governor.

[The statement follows:]

Statement of Gov. William F. Winter of Mississippi

Mr. Chairman, it is a great privilege for me to appear before your subcommittee, and other members of the Senate, in behalf of the 1984 appropriation for the Tennessee-Tombigbee Waterway Project. I speak for the Tennessee-Tombigbee Authority, and for the Governors of the four other states concerned--Alabama, Kentucky, Tennessee and Florida, in addition to my state of Mississippi.

I am especially pleased to appear before a committee chaired by the distinguished Senator from Oregon, who has demonstrated such a broad knowledge and concern for the natural resource development problems of the entire nation.

Mr. Chairman, we support the full $90 million dollars proposed in the President's budget for the Tennessee-Tombigbee Waterway Project in the Fiscal year 1984. We are only two years away from the completion and operation of the project, and the budget figure will assure a continued path to that orderly completion.

At this point, however, I might mention that we in Mississippi are well aware of the leadership this committee has taken in sponsoring legislation to speed up federal activity in creating jobs, and the especially important role that Chairman Whitten has played in the Passage of this legislation. Most of the programs involved will be of benefit to our Tennessee-Tombigbee region, but I want to point out that construction of the Tenn-Tom itself has been a major source of employment in our state and throughout the Tenn-Tom area. Anything that adds funding to the Tenn-Tom creates jobs almost immediately, and by the same token, reduction of Tenn-Tom funding would reduce employment in our region.

Tenn-Tom construction has been a major source of employment in skilled and semi-skilled trades for minority workers in our region. The role of the Corps of Engineers in achieving a highly favorable record in this regard is to be highly commended. I have been personally involved in monitoring this effort by the Corps. The achievements have not been as much as I would have preferred, and I am sure that is also the reaction of the Corps of Engineers officers involved, but there have been impressive accomplishments in a difficult field.

The Affirmative Action program carried on by the Corps is being monitored and reviewed regularly by a unique organization which I, as Governor of Mississippi had a role in creating, and which has carried forward its program through an executive committee where the representative of the Governor of Mississippi happens to serve as chairman. I refer to the Tennessee-Tombigbee Project Area Council.

The Tenn-Tom PAC executive committee includes representatives of Governors of Alabama, Kentucky, Tennessee and Mississippi, officials of local government in all four states, representatives of community action groups from throughout the area, and representatives of business, labor and academic organizations and institutions, as well as officials of several federal agencies working in the region.

Tenn-Tom PAC has an Affirmative Action committee, headed by Brigadier General Edward Gay, Southeastern Division Engineer, which has a responsibility of establishing employment goals and policy in keeping with federal law and regulation, and monitoring the entire Affirmative Action program on the project. Most importantly, it serves as a forum for full and frank discussion of policy and problems in the area, where contractors, labor leaders, minority spokesman and Corps officials have full and frank discussion of the continuing problems involved.

It is my hope that this committee, with its membership adapted to meeting changing conditions, will serve an important role in the necessary efforts to assure fullest possible minority employment opportunities in the economic development which comes with operation of the waterway.

It is the planning for operation of the waterway that I want to stress here today.

We in the Tenn-Tom waterway area expect to utilize the next two years in a coordinated planning effort, working with the Corps of Engineers and other federal agencies, to make sure that Tenn-Tom lives up to its potential for economic development--a development designed not only to benefit our region, but to bring benefits to the entire nation.

AS ONE OF THE STEPS TO HELP BRING THIS ABOUT, AN ENLARGED ECONOMIC DEVELOPMENT COMMITTEE HAS BEEN ESTABLISHED BY OUR TENN-TOM WATERWAY AUTHORITY. THE CHAIRMAN IS FRED BUSH, OF TUPELO, MISSISSIPPI, A DISTINGUISHED ATTORNEY WHO HAS HAD PREVIOUS EXPERIENCE IN ECONOMIC DEVELOPMENT ACTIVITY IN MISSISSIPPI.

I HAVE ASKED DISTINGUISHED GROUP OF AMERICAN BUSINESS LEADERS, ACADEMICIANS, AND PUBLIC OFFICIALS, TO JOIN AN AD HOC COMMITTEE, TO BE CHAIRED BY W. T. HEARIN, PUBLISHER OF THE MOBILE PRESS-REGISTER, TO OUTLINE SOME BROAD GUIDELINES FOR COORDINATING FOREIGN SHIPMENTS THROUGH THE WATERWAY. THIS WILL INVOLVE SPECIFIC PLANNING FOR THE USE OF RAIL AND TRUCK TRAFFIC, IN ADDITION TO BARGE TRAFFIC, AND I EXPECT AND HOPE FOR ACTIVE COOPERATION IN THE WORK OF THIS COMMITTEE FROM EXECUTIVES OF THE BUSINESSES INVOLVED. THE REALITY OF THE WATERWAY SHOULD HELP TO HEAL OVER PREVIOUS FRICTIONS ABOUT THE PROJECT. THE OVERALL BENEFITS TO THE ECONOMY SHOULD MEAN MORE TO ALL OF US, THROUGHOUT THE NATION, THAN ANY PREVIOUS DIFFERENCES.

AS CHAIRMAN OF THE AUTHORITY, I SHALL PARTICIPATE IN A GENERAL PROGRAM TO PROMOTE PLANNING FOR FOREIGN TRADE DEVELOPMENT THROUGH THE PORT OF MOBILE, SCHEDULED NOW FOR APRIL 28.

THE TENNESSEE-TOMBIGBEE PROJECT AREA COUNCIL, DESCRIBED ABOVE, IS WORKING TO COORDINATE STATE ECONOMIC DEVELOPMENT PLANNING AS IT RELATES TO THE WATERWAY, AND TO HELP STIMULATE EFFECTIVE DEMONSTRATION OF VARIOUS PROGRAMS TO MAKE SURE THAT THE WATERWAY BENEFITS ARE FREELY AVAILABLE TO ALL CITIZENS OF THE AREA. I FORESEE THE POSSIBILITY OF THIS SMALL ORGANIZATION, WITH ITS REPRESENTATION OF LOCAL GOVERNMENT AND SMALL PRIVATE GROUPS OVER THE AREA, BECOMING A MAJOR FORCE FOR THE FULLEST POSSIBLE IMPLEMENTATION OF THE ECONOMIC BENEFITS WHICH WILL COME WITH THE WATERWAY.

TENN-TOM PAC CAN PROVIDE A LOCAL MULTI-STATE RELATIONSHIP FOR THE CORPS OF ENGINEERS IN IMPLEMENTING THE FIRST OPERATIONAL GUIDELINES FOR THE WATERWAY. IT CAN SERVE AS THE MEDIUM FOR ELIMINATING OR REDUCING INTERSTATE RIVALRY RELATING TO PORT DEVELOPMENT AND INDUSTRIAL LOCATION. WE ALL REALIZE THAT THERE CAN BE NO FULL UTILIZATION OF THE POTENTIAL BENEFITS OF THE TENN-TOM UNLESS THERE IS FULL LOCAL PARTICIPATION IN THE PLANNING FOR THE OPERATION OF THE PROJECT, AND WE ARE TODAY CONCENTRATING ON THAT GOAL.

MY STATEMENT TODAY HAS CONCENTRATED ON THE PLANNING FOR THE MOST EFFECTIVE USE OF THE WATERWAY, RATHER THAN DETAILS OR PROBLEMS IN THE REMAINING CONSTRUCTION PROGRAM. THE PEOPLE OF THE TENN-TOM WATERWAY AREA, THROUGH THEIR REGULARLY RELECTED OFFICIALS, AND THROUGH ORGANIZATIONS SUCH AS THE TENN-TOM WATERWAY AUTHORITY, AND THE TENN-TOM PROJECT AREA COUNCIL, ARE PREPARED TO MEET THE CHALLENGE TO LOCAL LEADERSHIP. WE APPRECIATE THE GREAT INTEREST OF OUR REPRESENTATIVES AND SENATORS IN THIS PROJECT, AND THROUGH THEM, OF ALL THE MEMBERS OF CONGRESS. WITH YOUR HELP, WE EXPECT TO DELIVER THE RESULT IN BENEFITS FOR ALL OF OUR PEOPLE, AND ADDED ECONOMIC STIMULUS FOR OUR ENTIRE COUNTRY.

STATEMENT OF WILLIAM J. BAXLEY, LIEUTENANT GOVERNOR OF ALABAMA

Senator COCHRAN. Now, Lieutenant Governor Bill Baxley is here, and we appreciate your being here to contribute to these hearings. You may proceed in any manner you wish.

Mr. BAXLEY. I would like to say Governor Wallace asked me to regret he could not be here. I am representing him as well as representing the legislature and the Lieutenant Governor's office.

PREPARED STATEMENTS

Governor Wallace has prepared some remarks for himself and me, and if it is in order, I think I would just like to have that statement included in the record and confine my remarks to just some brief general comments.

I would also like to introduce a statement from Jamie Etheredge, the Director of the Alabama Development Office, and Jamie is with us here today. If we could introduce those two prepared statements, I think perhaps we could save the committee's time.

Senator COCHRAN. We appreciate that and they will become a part of the record now.

[The statements follow:]

JOINT STATEMENT OF GOV. GEORGE C. WALLACE AND LT. GOV. WILLIAM J. BAXLER OF ALABAMA

Mr. Chairman and members of the subcommittee, it is indeed a privilege to provide remarks today in support of further funding which will soon lead to the completion of the Tennessee-Tombigbee Waterway. It is a pleasure to once again join with the Governors of our sister States, fellow Alabamians, and the members of the Tennessee-Tombigbee Waterway Development Authority before this subcommittee together to fulfill a dream—the completion of the Tennessee-Tombigbee Waterway.

Perhaps never in our history has a waterway project been subjected to such close scrutiny; however, all challenges have been successfully met. This is indicative of the viability of this project and of its future success. Recently it was announced that, with the early completion of several activities and continued funding at acceptable levels, the Tennessee-Tombigbee Waterway will provide for through commercial traffic in 1985. This will in itself be very important. Not only will the project be ahead of schedule, but it will also be completed without cost overruns which seem to have become the rule in many activities of the Federal Government.

The Tennessee-Tombigbee will provide not only regional development benefits, but will serve the Nation. The waterway will provide for the most energy-wise and cost-effective method of movement of materials and products. It will assist the farmers of Alabama and the Nation in the movement of the fertilizers and equipment they use and the products they produce. The waterway will assist us greatly in reestablishing our national industrial base and provide jobs and new opportunities for many, especially those less fortunate. The waterway will provide a new, shorter route to the deep ports of the gulf, especially the Port of Mobile, giving us an outlet for our goods and products to world markets.

Many do not re~~alize that,~~ for all practical purposes, the Tennessee-Tombigbee Waterway is navigable in Alabama. For several years now the major construction within Alabama has been completed and the waterway has been used for commercial barge traffic. Even though its full potential will not be reached until through traffic passes from the Tombigbee River into the Tennessee River, the portions of the waterway in Alabama are already providing an energy-wise and cost-effective transportation conduit into western Alabama.

The area served by the Tennessee-Tombigbee Waterway in Alabama has historically suffered from lack of job opportunities, especially among minority groups. Several of the counties adjacent to the waterway in Alabama have some of the lowest per capita income levels in the Nation and some of the highest unemployment rates. For example, in Greene County, Ala., the per capital income level in 1980 was $5,158, and in Hale County, Ala., it was $5,193, with the national per capital income of $9,511. The Florence, Ala., area, which is near the northern terminous of the Tennessee-Tombigbee Waterway where the waterway connects with the Tennessee River, had a January unemployment rate of 20.5 percent, while the rate for Alabama was 16.6 percent and the Nation as a whole was 11.4 percent.

The Tennessee-Tombigbee Waterway will provide a mechanism to assist the areas of western Alabama and eastern Mississippi to reach their potential by providing opportunities to develop the human and physical resources of the area. This clearly will have a positive influence to increase regional development benefits and opportunities. Even though in the past regional development benefits have not been included for the purpose of determining benefit-cost ratio for projects such as this, I believe they should be. However, they have been referred to recently in reference to additional cost sharing by the several States. A consistent policy needs to be defined in this regard. Even though we believe regional benefits will occur, clearly national objectives such as the wise utilization of the resources we have, the energy efficiency and low cost of waterway transportation, investment in the transportation infrastructure which industry and agriculture need, and providing the job opportunities to undeveloped areas and the unfortunate, will be served by the Tennessee-Tombigbee Waterway.

The Tennessee-Tombigbee Waterway, when completed, will be part and parcel of the national inland waterway system and the national transportation system. All of the transportation modes working together provide the type of systems which make our country great.

Mr. Chairman, in closing, I would like to thank you and the other members of the committee for your support over the years of this vital project.

STATEMENT OF JAMIE ETHEREDGE, DIRECTOR, ALABAMA DEVELOPMENT OFFICE

Mr. Chairman and Members of the Subcommittee on Energy and Water Development:

I represent the Alabama Development Office, an agency created by legislative enactment and charged with responsibility for the comprehensive development of the State's human, economic and physical resources.

While we have our own projects for achieving this laudable goal, we are, by law, also charged with supporting all projects of other levels of government that will enhance the economic welfare of our citizens.

For this reason, all of my predecessors at the Alabama Development Office have given enthusiastic endorsement to the Tenn-Tom since the project began in 1971.

Because of the current national economic decline, Alabama, like most other states, has problems of unemployment. Our industrial complex has been ravaged by a flood of foreign imports. On top of this, the area through which the Tenn-Tom passes is an underdeveloped region and desperately needs the jobs a completed waterway will bring.

In recent weeks, there have been numerous encouraging indications of a "turn around" in the American economy. May I respectfully suggest that now is the time to push for completion of the Tenn-Tom so that it can contribute to the return of a healthy economy.

The agency I head is presently engaged in negotiations with a very large foreign company seeking a site in Alabama for a manufacturing plant. Corporate officials of this company have made no secret that a completed Tenn-Tom is a major factor in their desire to locate in Alabama.

This is not an isolated case. In Greene County, through local initiative, an industrial park has recently been established on the Tombigbee River. Already, a pulp manufacturing company has purchased a site and plans to export down the waterway to worldwide customers through Alabama's Port of Mobile. Jobs will be created.

Alabama as well as the nation needs these jobs. As always, these jobs will create other jobs in a process known to industrial developers as the "multiplier effect."

Downriver in the Alabama County of Sumter, local leadership has established an industrial park. In time, Port Epes will attract manufacturing plants which will create jobs and impact the Tenn-Tom in the process. I was privileged to participate in groundbreaking for this facility just a few weeks ago.

It may surprise members of the subcommittee to learn that since the Tenn-Tom project was launched, industrial plants have invested in excess of $1.2 billion in the Mobile area alone. Virtually all of these plants will use the waterway. This does not include other plants which have located above Mobile on the Tenn-Tom as well as on water arteries feeding into the waterway.

Not only have many companies in the private sector invested large sums of money in Alabama facilities in anticipation of a completed Tenn-Tom, but the State of Alabama has "kept the faith" on the project.

More than $250 million have been spent to enlarge and modernize the cargo handling and storage facilities at the Port of Mobile as well as to relocate and rebuild bridges and highways across the waterway.

In view of the tremendous investments made by federal, state, and local governments as well as the private sector to bring the Tenn-Tom to its present state of development (roughly 80% complete), any talk of not funding the remaining segments appears to be "penny wise and pound foolish."

The beauty of the Tenn-Tom is that it not only provides tangible benefits for our state as well as the nation, but long range benefits. When we consider the Erie, Suez, and Panama Canals, and the St. Lawrence Seaway, we discover one thing common to all ... each has served mankind over long periods of time.

The Tenn-Tom waterway will be no different. Once completed, it will serve this nation for hundreds of years.

In conclusion, may I say that my state is grateful for your past support of the Tenn-Tom. We sincerely request that you approve the $90 million budget estimate for this project in 1984.

Thank you for allowing me to appear before this committee.

Mr. BAXLEY. It is from several generations that will owe a great debt to the Senators and Representatives that are here now and have fought for the last decade for this project. This is a great personal pleasure for me to meet with Senator Stennis, whom I have admired for many years. But it is a bipartisan effort, not only the Senators and Representatives from our sections, but around the country have fought to see this project to near completion now. We are going to owe a debt of gratitude for a long time to come.

The arguments pro and con are well known. The con arguments, of course, we think did not have much merit years ago, but to make those arguments now at this stage of completion is almost ludicrous to the objections to be raised about it. So I think it would belabor the point for me to talk much more, and I know how busy you are.

The people of our section, our State, trust and have confidence in the representatives up here in Congress and we know we will be treated fairly by the committee, the Senate, and the Congress as a whole. We feel one day when this project is finally completed, everybody associated with it will be able to look back and say they did something that was a benefit not only to our section, but to the national good, and we appreciate it and I will stand on our written remarks.

Senator COCHRAN. Thank you, Governor, we appreciate your being here and providing the subcommittee with that fine statement.

Mr. BAXLEY. Mr. Chairman, it might save the committee—could I introduce the remarks about the Alabama-Coosa, and the Tombigbee-Warrior?

Senator COCHRAN. We will put it in at the appropriate place in the record. We appreciate your bringing that to our attention. We knew we had representatives from your State to talk about those projects, and we are glad to have the benefit of your comments on those as well. They will be made a part of the record.

Mr. BAXLEY. Thank you, Mr. Chairman.

Senator COCHRAN. Thank you.

Governor Winter, I will let you allocate the time.

Governor WINTER. Let me introduce a man you have seen before, Mr. Glover Wilkins.

Glover, would you make whatever statement you wish to make and then introduce the other witnesses here.

STATEMENT OF GLOVER WILKINS, ADMINISTRATOR, TENNESSEE-TOMBIGBEE WATERWAY DEVELOPMENT AUTHORITY

PREPARED STATEMENTS

Mr. WILKINS. Thank you very much, Governor.

Mr. Chairman, at this time, I would like to ask permission to enter some additional statements in the record.

Senator COCHRAN. We are happy to have those and they will be incorporated in the record.

Mr. WILKINS. Mr. Chairman, at this time, we have with us this morning Mrs. Mary Eileen O'Keefe, who is chairman of the board of the International Coal Sales Inc.

She made a very wonderful statement this morning that I would like to enter into the record, but before doing it, I would like to say a little bit about her. She has offices in New York, Chicago, Indiana, Tennessee, and will have one soon in Mobile. She made a statement that the competition of coal coming from South Africa, Poland, Australia, and whatever, is causing the coal industry many problems, and she thinks one of the big problems is transportation. She said:

> With the building of the Tennessee-Tombigbee Waterway, American coal would be much more competitive and would, therefore, move the export and would be added to the balance of trade and to our national trade potential.

She regretted very much that she could not be here today. She was called back on an emergency but asked that her statement be made a part of the record, along with my statement which has been submitted.

Senator COCHRAN. We will include those in the record.

[The statements follow:]

STATEMENT OF GLOVER WILKINS, ADMINISTRATOR, TENNESSEE-TOMBIGBEE WATERWAY DEVELOPMENT AUTHORITY

Mr. Chairman, I am Glover Wilkins, Administrator of the Tennessee-Tombigbee Waterway Development Authority.

I appreciate the opportunity to once again present a statement on the current status of the Tenn-Tom to the members of this Subcommittee. This is my 25th year with the Authority. I have had the privilege to appear before the Congress in support of the Tenn-Tom most of these years.

I am pleased to report that construction of the waterway is quickly moving toward completion. There is now some construction activity or completed work along the entire 234 miles of the project.

All ten of the locks and dams are essentially completed except Locks D & E, which are greater than 50 percent completed. Less than 2 million cubic yards of earth remain to be excavated from the so-called Divide Cut. The entire 155 million cubic yards of excavation in the Cut would have been completed at the end of 1982 had it not been for inclement weather.

Presently, $1,518,225,000 of Federal funds have been allocated to the waterway of which $1,383,244,000 were actually spent as of January 1, 1983.

I am pleased to report that the cost of the project has not increased during the past two years. The currently estimated Federal (Corps of Engineers) cost of the project is $1,820,000,000. It now appears the waterway can be opened to navigation at a total cost less then $2 billion.

Included in the above total cost is $159 million spent by the States of Alabama and Mississippi for construction of 13 new highway bridges across the waterway. All are completed and open to traffic except one which is nearing completion. The States have fully met their responsibilities to the construction of the waterway.

Navigational features of the project are now about 85 percent complete. The entire project is over 75 percent completed. If present progress continues, the waterway will be open to commercial navigation by September, 1985, one year earlier than originally planned.

Commerce is already utilizing the waterway. About 180 miles are now opened to limited navigation, including that portion south of Columbus, Mississippi. So far, about 210,000 tons of commerce, primarily grain, have moved on this portion of the waterway mainly from one small private terminal at Aliceville. Gypsum, originating in Spain, is now being backhauled to the Aliceville port which will help reduce the rates for the grain shipments and provide additional savings to local farmers.

Construction of the waterway has helped greatly to dampen the impact of the current recession along the waterway corridor. As many as 5,000 workers have been employed as a result of Tenn-Tom. Most all of the workers would have been unemployed without the waterway construction, costing the Government about $20 million in unemployment compensation.

Over 80 percent of these workers are from the local area. Emphasis on local hiring has helped preclude the "boom or bust" phenomena typical of most large construction projects in rural areas.

Progressive affirmative action programs have permitted minorities to share in the economic benefits generated by the waterway. About 23-27 percent of the total man-hours of work on the waterway have gone to minorities. In addition, about 5 percent of the work has been accomplished by female workers.

In 1980, I reported that about $20 million of construction work have been accomplished by minority contractors. I am pleased to report that work for minority business enterprises have more than doubled since then or an amount of $41 million.

The waterway construction has also had a very favorable impact on the entire heavy construction industry during these economic hard times. Prime contractors located in 19 states have shared in the $1.5 billion of contracts awarded on Tenn-Tom so far. States receiving the largest amount of contracts are: Idaho, $298 million; Minnesota, $172 million; Alabama, $170 million; California, $99 million; Ohio and Maryland, $85 million each; and Oklahoma, $63 million.

Purchases of heavy equipment and construction-related materials have been in hundreds of $millions. For example, one contractor, alone, has purchased over $45 million of equipment and supplies from 24 states. The majority came from Illinois, Texas, Pennsylvania, Montana, and Florida.

The more cost-effective and energy-efficient transportation to be provided by Tenn-Tom when completed, will continue to contribute to the improvement of our economy.

By providing a shorter water route between mid-America and the Gulf of Mexico, the Tenn-Tom is expected to save industries and shippers located in 14 states about $135 million annually in transportation costs during a 50-year period.

About 28 million tons of commerce is expected to move on the Tenn-Tom to and from these States during the first year of its operation. This expected volume of commerce is almost equivalent to that now shipped on the Tennessee River, one of the busiest waterways in the Nation.

The States, Counties and local governments impacted by the waterway are beginning to make plans to handle this anticipated commerce. Alabama and Mississippi have already spent over $250 million in new ports and expansions in anticipation of completion of Tenn-Tom. About $225 million have been spent at the Alabama State Docks in Mobile, alone, for expansion of port facilities since construction of the waterway began in 1971.

New port facilities or expansions are underway or being planned at Epes, Boligee, Florence, and Decatur, Alabama. Similar developments are planned at Columbus, Aberdeen, Amory, and Fulton, Mississippi. Just recently, a $4-million expansion of the existing port at Yellow Creek at the northern terminus was announced.

As the waterway approaches completion, port and waterfront industrial sites will be developed in the other states impacted by the Tenn-Tom.

The Tennessee-Tombigbee's unique transportation advantage is that it will be a through waterway. Most inland waterways are on tributaries. All commerce moving on so-called tributary waterways either originates of terminates along the waterway itself. That will not be the case for Tenn-Tom.

The transportation benefits of Tenn-Tom, however, will not materialize unless the waterway is completed in its entirety. To complete navigation will require $180 million after this fiscal year, including the $90 million proposed for FY 1984 by President Reagan.

The remaining benefits-to-costs estimate for completing the waterway is 3.9 to 1 or $3.90 of national economic development benefits for each dollar remaining to be spent to complete the project. It is quite obvious the best interest of the Nation is to complete the waterway as early as possible.

There are no known impediments to completing Tenn-Tom on schedule if sufficient funding is continued. The Corps of Engineers has completed the Supplemental Environemtal Impact Statement (SEIS) called for by the Federal Court. The Federal District Court ruled last summer that the Corps had complied with the National Environmental Policy Act of 1969 and all administrative procedures and regulations in the preparation of this document. The plaintiffs' appeal of the lower court ruling was denied by the U.S. Fifth Circuit Court of Appeals. A hearing will be held on May 9, 1983 in the District Court on the adequacy of the SEIS. It is now obvious that this harrassing litigation pending on Tenn-Tom, nearly continuously since 1971, will be finally resolved in favor of the waterway.

On behalf of the Authority, I respectfully request that this Subcommittee approve the President's recommendations for Tenn-Tom in the amount of $90 million for FY 1984. This level of funding will keep the project on schedule.

We greatly appreciate the strong support this Subcommittee has provided to this important project. Without your support, I could not make this report on the excellent progress being made toward completing the waterway.

SUPPORTING WITNESSES

Tennessee-Tombigbee Authority members present: Emmett Yeiser, Jr., Tenn.; Guy McKenzie, Jr., Fla.; Fuller Kimbrell, Ala.; David Lovelace, Ky., representing Lt. Gov. Martha Layne Collins; George Firestone, Fla.; Bill Stevens, Fla.; Rick Manley, Ala.; Barbara Bobo, Ala.; Herman Ewing, Tenn.; Bill Thrash, Ala.; Jim High, Miss.; Jack Paxton, Ky.; Gov. W. Winter, Miss.; Z. C. Enix, Ky.; Alex Chamberlain, Ky.; Sam Creekmore, Miss.; Ray Thornton, Miss.; Bennie Turner, Miss.; Redwood Taylor, Ky.; Doyle Conner, Fla.; and Frank Smith, Miss., Governor Winter's assistant.

Tennessee-Tombigbee staff: Glover Wilkins, administrator; Donald G. Waldon, deputy administrator; and Pat Broocks-Ross, associate director of public affairs.

STATEMENT OF MARY EILEEN O'KEEFE, CHAIRMAN OF THE BOARD, INTERNATIONAL COAL SALES, INC.

Mr. Chairman, I am Mary Eileen O'Keefe, chairman of the board for International Coal Sales, Inc. We have offices in New York City, Chicago, New Orleans, and Evanston, Ind.

I am pleased to join Governor Winter and the other distinguished members of the authority here today in support of the early completion of the Tennessee-Tombigbee Waterway.

My company is in the coal export business. The completion of the Tennessee-Tombigbee Waterway is not only vital to our operations but to the entire coal industry.

Coal represents 90 percent of our Nation's total fossil fuel reserves. Yet, it supplies less than 20 percent of our energy needs. The major problem facing U.S. coal producers is the lack of cost-effective or efficient means of transporting coal to the markets, both domestic and foreign.

Last year I had the honor to participate in a coal trade mission to Europe sponsored by the U.S. Department of Commerce. This tour of European coal markets confirmed there is a strong market for coal exports to Europe. However, U.S. producers face a fundamental handicap in the price of its coal compared to that produced in Australia, South Africa, and other foreign countries.

Transportation is a major component of the total delivered cost of this low-valued commodity. The key to reducing transportation costs is expansion and improvement of our inland waterway system and the deepening of our coastal deepwater ports. The Tenn-Tom is one of those improvements that must be made if we are to compete for these foreign markets.

The export of coal from eastern Tennessee and Kentucky is currently prohibited because of exorbitant rail rates and inadequate transportation capacity. My company can presently ship coal from Pennsylvania to the gulf via the Ohio and Mississippi Rivers cheaper than we can ship east Tennessee/Kentucky coal, although this region is 800 to 900 miles closer to the gulf.

The difference in distance to deepwater ports from east Tennessee/Kentucky, using currently available water routes as compared to that available when Tenn-Tom is completed, is the difference between marketable and nonmarketable coal. I am simply saying some coal from this region will not be produced and will stay in the ground unless this waterway is completed.

The Tenn-Tom will provide a shorter, lower cost barge route to the gulf for this region, which holds more than 1 billion tons of coal reserves. It will save as much as 825 miles in getting this coal to the gulf for export. The waterway will also provide an alternative barge route for coal produced in the Illinois basin.

The coal producers served by the Tennessee-Tombigbee will have direct access to one of the most modern coal export facilities in the world at the Port of Mobile. This terminal will have a through-put capacity of about 24 million tons annually.

A further advantage offered by the Tenn-Tom is that Mobile has an excellent chance of becoming one of the first 55-foot-deep harbors in the United States. This depth will accommodate 150,000 dwt coal colliers. The use of these larger vessels will save from $6 to $8 per ton in delivered coal.

We expect to ship about 1 million tons of coal this year, increasing to about 5 million tons per year by 1985. A major portion of this tonnage will be shipped on the Tennessee-Tombigbee if it is completed. If it is not, we will be forced to find alternative suppliers in South America to meet our contracts.

Coal is our best hope to offset the Nation's staggering trade deficits. There is no doubt the markets exist. However, unless this committee and the Congress act quickly to improve our inland waterway system, such as completion of Tenn-Tom and construction of the Gallipolis lock on the Ohio, and deepen the ports such as Mobile, we will surrender these markets to our foreign competitors.

Thank you again for the opportunity to appear before you today.

LETTER FROM J. H. KELLER, PRESIDENT, INTERNATIONAL COAL SALES, INC.

FEBRUARY 15, 1982.

Mr. GLOVER WILKINS,
Administrator, Tennessee-Tombigbee Waterway Development Authority,
Columbus, Miss.

DEAR MR. WILKINS: We are in the export coal business and the completion of the Tombigbee is not only vital to our operation but to the coal industry in east Tennessee and east Kentucky.

The difference in mileage to the gulf ports, using current waterways versus the Tombigbee, is the difference between nonmarketable and marketable coal. Pricing for the foreign market of east Tennessee/Kentucky coal is currently prohibitive because of exorbitant transportation costs and inadequate transportation capacity.

We can currently ship coal on the Ohio-Mississippi system from Pennsylvania cheaper than we can ship Kentucky/Tennessee coal which is 800 to 900 miles closer to the gulf. The entire area of over 1 billion tons reserves is landlocked.

We expect to ship 1 million tons of coal by water in 1983, increasing to 5 million tons per year by 1987. A major portion of this will be through the Tombigbee, if it is completed. If not, we have alternative coal producers set up in South America.

Please feel free to call on us if we can be of service.

Very truly yours,

J. H. KELLER,
President.

STATEMENT OF BENJAMIN POLOTE, PRESIDENT, POLOTE CORP., INC.

Mr. WILKINS. The Governor referred to another witness we have, who I think certainly shows what Tennessee-Tombigbee is doing to benefit all Americans. We have with us Mr. Benjamin Polote, president of Polote Corp. of Savannah, Ga., who is the contractor on the Tennessee-Tombigbee project.

Mr. Polote.

Mr. POLOTE. Thank you Mr. Chairman. I am Benjamin Polote, president of that corporation, I appreciate the opportunity to appear before you today to represent all minority businesses working on the Tennessee-Tombigbee Waterway. I want to voice our support for continuing funding of this important project.

BENEFITS TO MINORITY BUSINESS FIRMS

My company is 1 of 35 minority firms benefiting from the construction of this waterway. Without the project, we would likely cease to have existed.

Presently, we have looked at the records and over $41 million of the construction funds have gone to minority firms thus far. These opportunities occurred mainly because of progressive affirmative action programs supported by the Corps of Engineers, the Construction Assistance Center, the waterway authorities, and others.

The Tennessee-Tombigbee has become a national showcase for affirmative action. It was recognized as such by President Carter.

Construction of the waterway has demonstrated how social and economic benefits to disadvantaged people can be realized from large Federal investments in public works programs. The social projects have occurred at no additional costs and are no deterrent to authorized purposes of the project. As an example of its success, minority contractors have come from as far away as St. Louis, and in our case we are from Savannah, Ga., working on the project. In order to provide opportunities for other small economic and disadvantaged businesses, we believe the Tenn-Tom minority business enterprise program should be applied to other projects throughout the Nation, and we ask that this be implemented in all such projects, such as the Red River Waterway project in Louisiana.

The Tenn-Tom has been a godsend to both minority workers and minority businesses. It has provided much-needed jobs—from 23 to 27 percent of the waterway jobs have gone to minorities in the past. Many were unemployed or underemployed prior to construction of Tenn-Tom. More importantly, these workers now possess a skill that will enable them to become productive citizens throughout the country long after this project is completed.

Minority businesses have realized similar long-term benefits. We have become more productive enterprises and we will be able to better compete in the private sector and become successful businessmen in the future as a result of the project.

It is with these opportunities that I ask that this be funded and completed.

Thank you.

Senator COCHRAN. Thank you very much.

Mr. WILKINS. At this time, I would like to call on Steve Jones, president of the Western Kentucky Coal Association of Madisonville, Ky.

STATEMENT OF STEPHEN JONES, REPRESENTING THE MINING AND RECLAMATION COUNCIL OF AMERICA AND THE WESTERN KENTUCKY COAL ASSOCIATION

Mr. JONES. Senators, in the interest of time I will request that the printed text be included in the record and I will just make some brief comments.

COAL TRANSPORTATION BENEFITS

I am Steve Jones, president of the Western Kentucky Coal Association in Madisonville, Ky. I appear today on behalf of our organization and also for the Mining Council of America, which represents some 2,500 coal companies in this Nation and over 70 percent of the coal production in America.

Like MARC, our organization is a regional association representing the coal industry in western Kentucky, which is a portion of the Illinois coal basin.

Also in our organization are allied support industries whose existence depends on the well-being of our industry.

Upon completion, it is estimated 21 million tons of coal will be transported on the waterways. Projected savings for this month are $61 million in transportation costs. By providing cost effective means of transporting America's vast coal resources, that helps to reduce recovery while enhancing the price competitiveness of American coal in the American market.

I would like also to give an "Amen" to what you will find in Miss O'Keefe's remarks. She made the point that currently it is much easier for their company to transport coal from Pennsylvania to Florida or to the coast than they can transport it from western Kentucky and southern Indiana to the other regions. That is a great problem we have in western Kentucky and Illinois and Indiana and Tennessee, and that will greatly facilitate our cost competitive to move the coal.

Senator COCHRAN. Thank you very much, Mr. Jones, for your statement.

[The statement follows:]

STATEMENT OF STEPHEN JONES, OWENSBORO, KY., ON BEHALF OF THE MINING AND RECLAMATION COUNCIL OF AMERICA AND THE WESTERN KENTUCKY COAL ASSOCIATION

MR. CHAIRMAN, I AM STEPHEN JONES, PRESIDENT OF THE WESTERN KENTUCKY COAL ASSOCIATION (WKCA). I APPEAR TODAY TO SUPPORT THE CONTINUATION OF FULL FUNDING FOR THE CONSTRUCTION OF THE TENNESSEE-TOMBIGBEE WATERWAY (TENN-TOM) ON BEHALF OF WKCA AND THE MINING AND RECLAMATION COUNCIL OF AMERICA (MARC).

MARC IS A NATIONAL ASSOCIATION REPRESENTING THE SURFACE COAL MINING INDUSTRY. THROUGH ITS CORPORATE MEMBERSHIP AND AFFILIATED STATE AND REGIONAL COAL ASSOCIATIONS, AS WKCA, MARC REPRESENTS MORE THAN 2500 COAL OPERATORS AND INDUSTRY SUPPLIERS NATIONWIDE. MARC'S MEMBER COMPANIES ACCOUNT FOR MORE THAN SEVENTY PERCENT OF OUR NATION'S TOTAL COAL PRODUCTION.

WKCA IS A REGIONAL COAL ASSOCIATION REPRESENTING THE COAL INDUSTRY IN THE WESTERN KENTUCKY COAL FIELD, WHICH IS A PORTION OF THE ILLINOIS COAL BASIN. LIKE MARC, OUR ORGANIZATION REPRESENTS COAL PRODUCERS, AS WELL AS ALLIED SUPPORT INDUSTRIES WHOSE VERY EXISTENCE DEPENDS ON THE WELL-BEING OF OUR INDUSTRY. IN 1982, OF THE 149 MILLION TONS OF COAL PRODUCED IN KENTUCKY, SOME 40 MILLION TONS WERE PRODUCED IN WESTERN KENTUCKY.

WE SUPPORT THE FUNDING FOR CONSTRUCTION OF THE WATERWAY CONNECTING THE TENNESSEE AND TOMBIGBEE RIVERS AT THE REQUESTED LEVELS. THIS 232-MILE WATERWAY, WHICH WILL CONNECT 16,000 MILES OF INLAND WATERWAYS, WAS BEGUN IN 1972 AND IS NOW OVER EIGHTY PERCENT COMPLETE. ABSENT INTERRUPTIONS THIS COST EFFECTIVE PROJECT MAY WELL BE COMPLETED BY 1985.

CUTTING OFF FUNDING AT THIS POINT OF TENN-TOM'S DEVELOPMENT WOULD DEPRIVE THE NATION OF THE ENORMOUS BENEFITS WHICH THIS VITAL WATERWAY WOULD PROVIDE. REGIONAL DEVELOPMENT, ENERGY SAVINGS, INCREASED EXPORT TRADE, AND THE CREATION OF JOBS ARE AMONG THE PRIMARY BENEFITS TO BE GAINED AS A RESULT OF THE CONSTRUCTION OF TENN-TOM.

WE MUST NOT BE CAUGHT IN THE SHORT-SIGHTED TRAP OF SLASHING SPENDING TO REALIZE IMMEDIATE SAVINGS. CUTTING DOLLARS FROM THE TENN-TOM BUDGET NOW WOULD JEOPARDIZE ENORMOUS ECONOMIC GROWTH POTENTIAL IN THE NEAR FUTURE. OUR NATION AND OUR INDUSTRY IS SUFFERING THE ECONOMIC CONSEQUENCES OF AN UNFAVORABLE BALANCE OF TRADE AND IS STRUGGLING TO RECOVER FROM A SEVERE RECESSION. THE TENN-TOM WILL DIRECTLY ADDRESS BOTH OF THESE CRUCIAL ISSUES. DURING ITS FIRST YEAR OF OPERATION, IT IS ESTIMATED THAT 21 MILLION TONS OF COAL WILL BE TRANSPORTED ON THE WATERWAY. THE PROJECTED SAVINGS FOR THIS MOVEMENT IS $61 MILLION IN TRANSPORTATION COSTS. BY PROVIDING A COST-EFFECTIVE MEANS OF TRANSPORTING AMERICA'S VAST COAL RESERVES, THE TENN-TOM WILL HELP TO PROVIDE REDUCED COSTS FOR POWER TO AID RECOVERY WHILE ENHANCING THE PRICE COMPETITIVENESS OF AMERICA COAL ON THE WORLD MARKET.

WE MUST NOT FORGET, MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE, THE OIL PRICE SHOCKS WHICH ADVERSELY IMPACTED OUR ECONOMY AND THE ECONOMIES OF OIL IMPORTING NATIONS DURING THE 1970'S. IN TOKYO IN 1979 AND VENICE IN 1980 THE UNITED STATES AND ITS TRADING PARTNERS COMMITTED THEMSELVES TO INCREASE THEIR UTILIZATION OF COAL AND TO IMPROVE THEIR TRANSPORTATION FACILITIES FOR COAL MOVEMENTS IN ORDER TO REDUCE WORLD DEPENDENCY ON OIL. ALTHOUGH WE MAY BE WITNESSING THE BEGINNING OF A BRIEF PERIOD OF RESPITE FROM RISING OIL PRICES, WE MUST NOT FORGET THAT THE CURRENT RECESSION IS A MAJOR FACTOR IN CURRENT SURPLUS OF OIL. ONCE THE WORLD ECONOMY REGAINS ITS STRENGTH, OIL IMPORTING NATIONS WILL AGAIN BE VULNERABLE. WE MUST NOT PERMIT OURSELVES TO FORGET THE DIFFICULT LESSONS WE SO RECENTLY LEARNED. HISTORY HAS TAUGHT US THAT A STRONG AND STABLE ECONOMY IN AMERICA IS SYNONOMOUS WITH ESCALATING OIL PRICES IN THE FOREIGN MARKET.

REGARDLESS, ECONOMICALLY RECOVERABLE OIL IS A FINITE RESOURCE OF LIMITED DURATION. WHILE COAL IS SIMILARLY A FINITE RESOURCE, OUR NATION ALONE HAS OVER 400 BILLION TONS OF PROVEN ECONOMICALLY RECOVERABLE COAL RESERVE. ENOUGH FOR HUNDREDS OF YEARS.

THE TENN-TOM IS AN INTEGRAL PART OF THE COMMITMENT OUR NATIONS MADE IN 1979 AND 1980. IT WILL CARRY COAL FROM EIGHT MAJOR COAL PRODUCING STATES TO BOTH DOMESTIC AND INTERNATIONAL MARKETS. . AS A CONSEQUENCE, WHEN COMPLETED, IT WILL PROVIDE JOBS IN MINING AND ALLIED INDUSTRIES FOR TENS OF THOUSANDS OF AMERICANS. IT WILL PROVIDE LOW COST, ENVIRONMENTALLY ACCEPTABLE, ENERGY FOR A SUBSTANTIAL AREA OF OUR NATION. IT WILL SIGNIFICANTLY CONTRIBUTE TO THE ONGOING EFFORT TO REDUCE DEPENDENCE ON OIL BOTH HERE AND ABROAD. IT WILL ENHANCE AN IMPORTANT EXPORT INDUSTRY.

ONE ADDITIONAL AND IMPORTANT POINT MUST BE HIGHLIGHTED MR. CHAIRMAN. BEGINNING IN 1976, IN AN EFFORT TO IMPROVE THE FINANCIAL STABILITY OF OUR NATION'S RAILROADS, THE CONGRESS INITIATED MEASURES TO DEREGULATE THE RAILROADS AND ENHANCE THEIR PROFITATILITY. THAT EFFORT HAS BEEN ENORMOUSLY SUCCESSFUL - BEYOND, I MIGHT ADD, WHAT THE CONGRESS INTENDED WHEN IT ENACTED THE "4-R" AND "STAGGERS" ACTS. THREE RECENT DECISIONS OF THE ICC- ON RAIL MARKET DOMINANCE, COAL RATE GUIDELINES, AND AN EXEMPTION FOR EXPORT COAL - HAVE ESSENTIALLY ELIMINATED THE PROTECTIONS FOR CAPTIVE SHIPPERS UNDER THE LAW. THE RAILROADS ARE NOW IN A POSITION TO REAP MONOPOLY PROFITS WITHOUT ICC REVIEW AND WITH IMMUNITY FROM SUIT UNDER THE ANTITRUST LAWS.

IT IS NOT WITHIN THE JURISDICTION OF THIS COMMITTEE TO ADDRESS THESE OUTRAGEOUS ACTIONS. THIS COMMITTEE, AND THE CONGRESS, CAN, HOWEVER HELP TO ASSURE THE PRESENCE OF COMPETITION, AND ITS MODERATING INFLUENCE, IN THE MOVEMENT OF COAL FROM AN IMPORTANT COAL PRODUCTION REGION BY APPROPRIATING THE NECESSARY FUNDING FOR THE TIMELY COMPLETION OF THE TENN-TOM. TRANSPORTATION COMPETITION IS ESSENTIAL TO THE FUTURE USE OF COAL BOTH HERE AND ABROAD AND COMPLETION ON THE TENN-TOM IS A CRITICAL COMPONENT OF SUCH COMPETITION.

INTRODUCTION OF SUPPORTING WITNESSES

Mr. WILKINS. Also I would like to have a list of the members of the authority present as well at this time I would like to introduce the staff of the authority with us: Don Walden, who is the deputy administrator, and Pat Booksrose, who is director of public affairs.

These people have been a help to us, and also Governor Winter's assistant, Mr. Frank Smith of Mississippi.

Mr. Chairman, I have been coming before this committee about 20 years now, and this is the first time we have ever asked for less money than we did the previous year. We are on a downhill grade Senator, and thank goodness for that. This project is about completed and we are asking for less money this year, in fact, less than half we got last year and the year before that, and more than likely we will ask for less money next year. So, if you will get us over this year, we will keep going down and have it built.

I would like to ask permission to hold the record open for a reasonable length of time to allow the submission of other statements.

Senator COCHRAN. That will be done, say 2 weeks.

Mr. WILKINS. At this time, I would like to thank you for the opportunity of being here, Senator.

Senator COCHRAN. Thank you, Mr. Wilkins, we appreciate your being here as always. Also Senator Huddleston of Kentucky and Congressman Bill Natcher of Kentucky could not be present today, but they have submitted statements for the record in support of the appropriations that is being considered for the project.

Mr. WILKINS. Excuse me, I did not mean to interrupt you, but I did have something that is very important I wanted to bring up. Governor Winter introduced the members of the Tombigbee River Water Management District. Mr. Larry Otis, their executive director is here and he has a statement he would like to put into the record, and if he could take my place.

Senator COCHRAN. Come forward, Mr. Otis.

TENNESSEE-TOMBIGBEE WATERWAY

STATEMENT OF LARRY OTIS, EXECUTIVE DIRECTOR, TOMBIGBEE RIVER VALLEY WATER MANAGEMENT DISTRICT

Mr. OTIS. Thank you Mr. Chairman, we have a prepared statement we would like to have put into the record.

Senator COCHRAN. We have that and it will be included.

STATE AND LOCAL FINANCIAL PARTICIPATION

Mr. OTIS. Briefly, we would like to state, as local sponsor of the waterway we have been responsible for the relocation activities of all the roads and all the other things that have been crossed. In its entrance in Alabama to its exit in Tennessee, there are county roads, highways that have had to be constructed, and I would like to state that the State of Mississippi has taken care of those obligations. It has done so with the cooperation from the authority, with the Mississippi State Legislature, and all the people involved. Those roads were closed voluntarily, those people have prepared and sold their land voluntarily for this waterway to come through. It is very important that this is a national waterway, but the State of Mississippi is bearing its burden in seeing that this waterway goes through. We have very little revenue within our State to take on the activities we have done, but we have met those obligations and we feel we will be able to continue those and carry that forth into the future.

We respectfully request you give strong consideration to early completion of this project, Senator.

[The statement follows:]

STATEMENT OF LARRY K. OTIS, EXECUTIVE DIRECTOR, TOMBIGBEE RIVER VALLEY WATER MANAGEMENT DISTRICT

SUMMARY

TENNESSEE-TOMBIGBEE WATERWAY PROJECT - PL 525, 79th CONGRESS MISSISSIPPI AND ALABAMA

RECOMMENDING CONTINUED FUNDING THAT WILL ALLOW CONTINUED CONSTRUCTION ON THIS PROJECT TO THE FULL CAPABILITY OF THE CORPS OF ENGINEERS.

TOMBIGBEE RIVER AND TRIBUTARIES

FLOOD CONTROL PROJECT - PL 85-500, 85th CONGRESS MISSISSIPPI AND ALABAMA

RECOMMENDING CONTINUED SUPPORT OF FLOOD CONTROL PROJECTS ON THE TOMBIGBEE RIVER AND TRIBUTARIES IN THE STATE OF MISSISSIPPI TO THE EXTENT OF THE CORPS OF ENGINEERS' FULL CAPABILITY.

In 1984, the State of Mississippi will complete the final bridge across the Tennessee-Tombigbee Waterway. The State of Mississippi has constructed 10 bridges at a total cost of $30,000,000.00. The counties that are crossed by the Tennessee-Tombigbee Waterway are paying for the construction of those bridges.

Each of the counties through which the Waterway passes has had to close roads. These 20 roads and bridges are roads that were built and paid for with local and state funds. These roads are now abandoned or lost in the Waterway.

These counties have voluntarily closed all necessary roads for the construction of the Waterway. New access roads have had to be constructed to allow citizens to travel from their homes and farms to the area towns. These roads have already cost over $15,000,000.00. Electric, water and sewer lines to and from towns have been moved, cut or relocated in many places at a cost. That cost is in increases that have resulted from higher water bills from local water associations, increased expenses in local travel cost of having to travel along the canal to reach a bridge.

This added cost is paid for by the local Mississippian now and forever.

Mississippi is carrying a heavy burden of non-federal relocation costs not simply in millions of dollars spent, but in direct citizen cost of transportation, relocating towns, communities, severing counties into two separate units, selling of homesteads that have been in families since the mid-1800's.

Mississippi is doing its share to see that this last link of a national waterway is available to help Kentucky, Tennessee and West Virginia coal, Ohio and Pennsylvania steel and Tennessee grain reach their Gulf Coast destinations and inbound commodities arrive at the lowest cost.

We likewise are not going to sit by and watch these Mid-America commodities travel through our state.

An intensive search is underway to locate the best large scale industrial sites on the Waterway in Mississippi. Hopefully, legislation now pending in the Mississippi Legislature will enable six or more 1500 acre tracts to be made available for major industrial development.

Northeast Mississippi industry and business leaders interested in shipping on the waterway are already meeting to discuss import-export and domestic opportunities for their plants. Governor Winter spoke at the organizational meeting sponsored by the Tombigbee River Valley Water Management District for industry, business and agricultural organizations that are using or planning to use the Waterway. Over 52 industries were represented and eager to see the Waterway available for their use.

With the project nearing 80% completion, we are beginning to see a great deal of activity by our area commercial sector.

In view of the fact that the Tennessee-Tombigbee Waterway is a project of national importance, with benefits to many states, we feel that Mississippi has contributed and continues to contribute a great effort, according to its ability to pay.

We cannot, however, let up in our efforts to see this national waterway finished and used by all that have access to its ports from Pennsylvania to Florida.

Many plans are being made for growth and development, but none will occur until the Waterway is a reality and the goods and services of America are moving north and south, east and west. We have come to almost 80% completion. We must move forward to the final phase of the Tennessee-Tombigbee Waterway.

We respectfully request your careful consideration in providing funds for early completion of the Tennessee-Tombigbee Waterway.

LIST OF INDIVIDUALS APPEARING IN SUPPORT OF THE STATEMENT SUBMITTED BY TOMBIGBEE RIVER VALLEY WATER MANAGEMENT DISTRICT TUPELO, MISSISSIPPI

MARCH 23, 1983

Robert L. Calvert, President
West Point, MS 39773

Larry Otis
Executive Director
Tupelo, MS 38802

T. Charles Gower
Secretary
Baldwyn, MS 38824

Charles R. Caviness, Director
Corinth, MS 38834

O. E. Bostick, Director
Golden, MS 38847

Mike Sullivan, Director
Okolona, MS 38860

Steve Mayhorn, Director
Tupelo, MS 38801

Allen Harpole, Director
Columbus, MS 39701

Jimmie Mills
Engineer
Tupelo, MS 38802

Senator COCHRAN. Thank you very much, Mr. Otis.

How much has the State spent on the project such as you referred to, the relocation and reconstruction of roadways?

Mr. OTIS. Some of this is very difficult to put a figure on, but we know that approximately $15 million in access roads have had to be built at a combined cost that the State and some Federal funds have been involved, approximately $130 million in bridges have been put across the waterway. The cost in additional expenses to the Mississippi citizen is something that appears nowhere, and this is where a water system was disrupted, additional loans have had to be secured to relocate that waterway system and those citizens are paying higher water bills until those loans are paid off.

There are towns being moved from one place to another, and these are costs that can not be calculated, farms that people have owned since the State has been established is a cost that is there, and these people will have borne this gladly. They are not expecting miracles out of this immediately, but they have given up all they have in order that this waterway can be through, and it is a national figure as far as a system, and I think, sir, according to the ability to pay, Mississippi has more than borne its share in this particular program.

Governor WINTER. Mr. Chairman, to answer your question, Alabama and Mississippi together have spent in excess of $159 million, that is on costs related to the project. In addition, there is another $250 million spent by these States and the localities in projects that are indirectly related to it.

Senator COCHRAN. Does anybody have a figure that meets the total investment for private citizens in preparation for the use of the waterway. I understand that over $200 million has been spent in Mobile at the port, upgrading docks and warehouse facilities to accommodate increased use of the port as a result of this waterway project.

Do we have an overall figure like that?

Mr. WILKINS. We are in the process of making that study right now and when we have it, we will furnish it.

Senator COCHRAN. Because I know a lot of this work is underway—one statement mentioned that plans being made for facilities to use or take advantage of the waterway at Aberdeen, Decatur, and others are mentioned.

Mr. OTIS. Mr. Chairman, we recently had a meeting which we are trying to see the interest of industry, and we have recently had 70 industries express a desire to become associated together in seeking ways to expand their markets both up the river and exportwise, and we are 2 years ahead of that opening date.

[The information follows:]

STATE AND LOCAL INVESTMENT RELATED TO THE TENNESSEE-TOMBIGBEE WATERWAY

Mississippi and Alabama, as local sponsors for the Tennessee-Tombigbee Waterway, have obligated $159 million in non-Federal costs for highways, bridges, sewer and water supply relocation, and construction.

In addition, local sponsors in Mississippi have expended $736,772 in secondary roads, waterline relocation, appraisals, and legal fees. An additional $1,546,000 will be required from Alabama and Mississippi to fulfill obligations under the 50/50 cost-sharing plan for operation, maintenance, and construction of recreation facilities. The estimated cost to the States for maintenance of these facilities is $215,000 annually.

Approximately $275 million in public funds have been obligated by the States of Mississippi and Alabama alone for public port/industrial site developments related to Tenn-Tom. In addition, Kentucky and Tennessee have invested over $65 million for ports impacted by completion of the Tennessee-Tombigbee Waterway.

Untold millions of dollars more have already been invested by private interests in anticipation of the waterway. That total grows daily as the completion of the waterway nears. For instance, a quick and incomplete assessment of a few private ports under development on the Tennessee-Tombigbee Waterway in Alabama and Mississippi only indicates upward of $40 million has been privately invested predicated on completion of the waterway. As one example, the Mobile Chamber of Commerce in 1982 estimated that over $1.6 billion industrial expansion has occurred in Mobile predicated on Tenn-Tom.

While there has been no official or unofficial accounting of the total private investments made in Alabama, Mississippi, Tennessee, Kentucky, and Florida relative to the Tennessee-Tombigbee Waterway to date, it is only reasonable to assume that the private investment must be at least equal to the public investment.

CLOSING REMARKS

Senator COCHRAN. There is something about this hearing today that has a degree of electricity about it, and Mr. Wilkins mentioned this was a year when a request was being made for less money than the previous year. There is something that illustrates what is very exciting to me and I know to all of you here.

We see a request from the administration for the same amount that was requested by those here. And Governor Winter said a lot, I think, when he pointed to the fact that the private citizens are so deeply committed to this effort; that is, local elected officials, State officials, Federal elected officials, all working together in cooperation to bring their project to a completion over a long period of time. So it is an exciting time when you can see the end in sight and it really is going to get built. But there have been some battles, some close votes.

And one thing needs to be said, one point, and that is there are Senators and Congressmen on both sides of the aisle from points in this country a long way from the region who have been very involved in helping secure the votes at the right time and support of this waterway project, so it is not a regional effort by itself. We have had a lot of help from Congressmen and Senators all over the country, with friends of the region or those who see the need to have this transportation facility completed. It is a great asset for our Nation. That point needs to be well recognized.

We face a challenge even after we finish the project, and I do not think we are counting our money before we really ought to, but I think we are going to see this through. We will see it completed, but we will not be able to stop work then. It will remain a challenge to utilize it to its fullest benefit and potential as Governor Winter pointed out, and that will be a continuing effort on the part of all of us who are involved in this.

I think the statements were excellent and we appreciate very much your contribution to this.

Senator Stennis.

Senator STENNIS. Well, I cannot add anything. It is a happy day for all of us, the final blow has not been struck, the final work has not been done, so we will use this joy we have today for the energy of tomorrow, and a lot of bricks and stops and starts between now and the finish, and our people, some will be discouraged, because this does not bloom overnight, and I have seen that in other areas. But they will respond as they have heretofore, and leadership is there—and this is a reality now that has come in our time, and it has helped us.

Now, you have other projects that you are going to discuss today?

Senator COCHRAN. Yes, the Alabama-Coosa River improvement situation, the Warrior-Tombigbee Waterway, and Tri-River Association.

Senator STENNIS. Well, I thank you, but I yield to these worthy projects; they are a part of the area there and if you want to take them up.

Senator COCHRAN. Let us take a brief recess then, if there are no other comments.

Governor WINTER. Excuse me; thank you and Senator Stennis for the courtesy of this hearing and the receptivity you have given us and the support you have given this project for so long.

Senator COCHRAN. We will take a 5-minute break.

Senator STENNIS. Before you do, let me say the Governor has given a splendid 4 years of support to this project and leadership. I happen to remember this from last year.

Senator COCHRAN. We stand in recess for 5 minutes.

[A brief recess was taken.]

COOSA-ALABAMA WATERWAY

STATEMENTS OF:

CHRIS HEINZ, PRESIDENT, COOSA-ALABAMA RIVER IMPROVEMENT ASSOCIATION

C. R. CARLSON, EXECUTIVE VICE PRESIDENT, COOSA-ALABAMA RIVER IMPROVEMENT ASSOCIATION.

Senator STENNIS. Ladies and gentlemen, the next project on the list here is Coosa-Alabama Waterway, Mr. Chris Heinz, Coosa-Alabama River Improvement Association.

Mr. Heinz.

If we may resume our seats please, we are going to run this as kind of a half double-header I suppose you would call it; do not get an idea we do not keep an eye on those people.

Let us close the door if we can.

All right, Mr. Heinz, we are glad to have you here. This is an old solid project; you have been handling that water down there to the small river, and I fly over that area a lot, and I watch with pride as traffic moves on the river.

Do you have a prepared statement?

Mr. HEINZ. Yes, my statement has been filed, and Mr. Carlson will speak for me.

Mr. Carlson.

Mr. CARLSON. Thank you very much. We are honored that Lieutenant Governor Baxley is here, and we will ask him to make the first statement.

Senator STENNIS. Yes, Governor, we will hear you right now.

STATEMENT OF LIEUTENANT GOVERNOR BAXLEY OF ALABAMA

Mr. BAXLEY. Thank you Senator, I think I will repeat something in the present sense, I said while you were out.

Senator STENNIS. I did not hear you the first time, so repeat it.

Mr. BAXLEY. One of the great thrills for me, and I mean this sincerely was to be able to meet and shake hands with you, because I have admired you personally since I was in grade school, and that in itself is worth the trip.

Senator STENNIS. We will meet many more times, I am sure.

Mr. BAXLEY. We have a prepared statement for myself and Governor Wallace, so there is no need to rehash that.

Let me briefly say that this Coosa-Alabama project is important. We are realists and we realize there are some things that are impossible right now, but we do think it is very very important. I would like to make two points. One, to have enough money appropriated to keep that river navigable, and also enough to keep the studies with the feasability, we hope the Coosa-Alabama project will be a reality, one day. We are not asking for the Moon this time, but we think what has been asked for is needed and we feel we will get fair treatment at the hands of good people like you.

Senator STENNIS. You are on the right track.

What we most need in this country now, I think, is a modernized, up-to-date water plan legislation, a plan for water.

And we are running on a flat tire now. We have not had comprehensive legislation on the subject. So you stay right in here and stay up front, that is where you belong, up front, and it will come, it will come I am sure.

All right.

[The statement follows:]

STATEMENT OF GOV. GEORGE C. WALLACE OF ALABAMA

Mr. Chairman, it is a privilege and a pleasure to appear before this subcommittee, along with the members of the Coosa-Alabama River Improvement Association, in support of navigation of the Alabama River. Specifically, we endorse the request of the association and its supporters for continued funding of the full-time operation and the necessary maintenance of the Alabama River.

This waterway provides a vital link into the heartland of Alabama connecting the central Alabama area to the gulf Port of Mobile and the other waterways of our national inland waterway system. This provides a dependable, safe, and cost-effective method of transportation of materials and products, both industrial and agricultural, as well as provide jobs and opportunities for many in Alabama.

The existing navigation project on the Alabama River is proving to be, even in these economically depressed times, a cost-effective method of low-cost commercial transportation. It has provided for numerous new opportunities and jobs in central and south Alabama. Several new industries have located in the area based on the availability of waterway transportation. In several instances, the waterway has provided for the opportunity to develop resources which are vital to the future of the area, but, could not have been developed without the navigation project. The existing project, in addition to commercial navigation, provides for hydroelectric generation, fish and wildlife enhancement, and recreational opportunities, all in harmony with sound environmental policy. In the last 2 years the National Bass Masters Classic fishing championship has been held on the upper impoundment on this existing navigation project in the vicinity of Montgomery. It is our feeling this may become the permanent home for this national event. We believe this to be indicative of environmental protection while utilizing and developing the resources available.

In closing, I would like to pledge my support and again express the intention of the State of Alabama to adequately meet its responsibilities and obligations for this project as defined by Congress. I would also like to express thanks to the chairman and all the members of the subcommittee for the support over the years and for their assistance in insuring adequate funding is provided for the operation and maintenance of the existing project.

STATEMENT OF JAMIE ETHREDGE, DIRECTOR, ALABAMA DIRECTOR'S OFFICE

Mr. CARLSON. Our next witness is Mr. Jamie Ethredge, the director of our Alabama director's office, and a member of the new cabinet.

Mr. ETHREDGE. Senator, I have prepared some remarks that I would like to have included in the record. For the sake of time, I would defer to our Lieutenant Governor, who has spoken before. We are appreciative of your and this committee's efforts to complete the study of our river—thank you for your attention to us today.

Senator STENNIS. Well, we thank you for your interest. You men from Alabama can also come back anytime—you know how to handle your case.

That is the second signal for a vote in the Senate Chamber so you had better go. I am sure Senator Cochran will be back soon.

[A brief recess was taken.]

STATEMENT OF JAMIE ETHEREDGE, DIRECTOR, ALABAMA DEVELOPMENT OFFICE

Mr. Chairman and Members of the Subcommittee on Energy and Water Development:

I represent the Alabama Development Office, an agency created by legislative enactment and charged with responsibility for the comprehensive development of the State's human, economic and physical resources.

While we have our own projects for achieving this laudable goal, we are, by law, also charged with supporting all projects of other levels of government that will enhance the economic welfare of our citizens.

For this reason, all of my predecessors at the Alabama Development Office have given enthusiastic endorsement to the Tenn-Tom since the project began in 1971.

Because of the current national economic decline, Alabama, like most other states, has problems of unemployment. Our industrial complex has been ravaged by a flood of foreign imports. On top of this, the area through which the Tenn-Tom passes is an underdeveloped region and desperately needs the jobs a completed waterway will bring.

In recent weeks, there have been numerous encouraging indications of a "turn around" in the American economy. May I respectfully suggest that now is the time to push for completion of the Tenn-Tom so that it can contribute to the return of a healthy economy.

The agency I head is presently engaged in negotiations with a very large foreign company seeking a site in Alabama for a manufacturing plant. Corporate officials of this company have made no secret that a completed Tenn-Tom is a major factor in their desire to locate in Alabama.

This is not an isolated case. In Greene County, through local initiative, an industrial park has recently been established on the Tombigbee River. Already, a pulp manufacturing company has purchased a site and plans to export down the waterway to worldwide customers through Alabama's Port of Mobile. Jobs will be created.

Alabama as well as the nation needs these jobs. As always, these jobs will create other jobs in a process known to industrial developers as the "multiplier effect."

Downriver in the Alabama County of Sumter, local leadership has established an industrial park. In time, Port Epes will attract manufacturing plants which will create jobs and impact the Tenn-Tom in the process. I was privileged to participate in groundbreaking for this facility just a few weeks ago.

It may surprise members of the subcommittee to learn that since the Tenn-Tom project was launched, industrial plants have invested in excess of $1.2 billion in the Mobile area alone. Virtually all of these plants will use the waterway. This does not include other plants which have located above Mobile on the Tenn-Tom as well as on water arteries feeding into the waterway.

Not only have many companies in the private sector invested large sums of money in Alabama facilities in anticipation of a completed Tenn-Tom, but the State of Alabama has "kept the faith" on the project.

More than $250 million have been spent to enlarge and modernize the cargo handling and storage facilities at the Port of Mobile as well as to relocate and rebuild bridges and highways across the waterway.

In view of the tremendous investments made by federal, state, and local governments as well as the private sector to bring the Tenn-Tom to its present state of development (roughly 80% complete), any talk of not funding the remaining segments appears to be "penny wise and pound foolish."

The beauty of the Tenn-Tom is that it not only provides tangible benefits for our state as well as the nation, but long range benefits. When we consider the Erie, Suez, and Panama Canals, and the St. Lawrence Seaway, we discover one thing common to all ... each has served mankind over long periods of time.

The Tenn-Tom waterway will be no different. Once completed, it will serve this nation for hundreds of years.

In conclusion, may I say that my state is grateful for your past support of the Tenn-Tom. We sincerely request that you approve the $90 million budget estimate for this project in 1984.

Thank you for allowing me to appear before this committee.

LETTER FROM JAMIE ETHEREDGE, DIRECTOR, ALABAMA DEVELOPMENT OFFICE

March 23, 1983

Honorable Mark Hatfield, Chairman
Subcommittee on Appropriations for
Energy and Water Development
United States Senate
Washington, DC 20510

Dear Senator Hatfield::

As director of the State's industrial development agency, I am greatly concerned over the deterioration of the navigation channel along the Alabama and Mobile Rivers that lead to Alabama's only world port, Mobile. Many Alabamians work in manufacturing plants that have, through the years, located on these arteries of commerce. When these companies purchased sites and built huge plants costing sometimes into the hundreds of millions of dollars, they did so on the basis of using the river year around for either import or export purposes.

In addition, we have many new industrial prospects that wish to locate facilities on the waterway, but shy away, instead, when they learn of the present state of the channel. When our national economy is showing signs of revival, it is deplorable that we are sometimes hindered in our effort to attract manufacturing payrolls because of lack of channel maintenance on the Alabama and Mobile Rivers.

We can understand that with our present national economy, it may be impossible at this time to proceed with the development of the Coosa-Alabama waterway to Rome, Georgia. However, some of the best industrial sites in our state would profit from this waterway, and we hope that there will be a time in the future when it can be developed.

On the other hand, maintaining a navigable channel from Alabama's Capital City, Montgomery, to Mobile, the nation's seventh ranking port in import tonnage, is a matter that calls for immediate attention. At stake are thousands of jobs and tremendous corporate investments.

Therefore, we earnestly seek your support for the Operations and Maintenance requests made by the Alabama-Coosa River Improvement Association.

Sincerely,

Jamie Etheredge

Jamie Etheredge
Director

Senator COCHRAN. The committee will come to order.

I understand that we have had a statement by Mr. Heinz, who is president of the Coosa-Alabama River Association, and Governor Baxley has made a part of the record his earlier statement in support of this project.

Do you have any other comments, Mr. Carlson?

Mr. CARLSON. Yes, sir, I am Mr. Carlson, executive vice president of the association, sir.

President Heinz has asked me to make the overview, highlight statement, written statement, which we have submitted.

We come from the association of both private and public interests. We call our association a true association of the public and private associations, and we have with us statements from them, some 15 statements, indicating the diverse membership that we have. We want to request these statements be entered into the record at this proceeding.

We also have a list of our members who came to Washington today for their appearance before the Congress. Many had to get away for planes today, but some are in the House, and I would like them to stand and be recognized.

As you know, they represent counties, cities—we have some 18 counties, 23 municipalities—in addition to the private firms and individuals who are members.

Senator COCHRAN. We will review those for inclusion in the record at this point. We will also include the list of your supporting witnesses here today, and the statements supporting projects on the Alabama-Coosa River system.

[The statements follow:]

Statement of Chris B. Heinz, President, Coosa-Alabama River Improvement Association, Inc.

We submit this statement in full recognition of the fact that the appropriations committees of the Congress have been the primary vehicle for building the waterways of our nation. Without the foresight of you and your predecessors, this vital component of our transportation system and our nation's economic strength would not exist.

In addition to this statement, we bring written statements of support and appreciation from many other members of our Association. The list of originators of these statements indicates the diversity of our membership which we describe as a true "association" of the public and private sectors of our part of the country. We request that these statements be entered into the record of these proceedings.

We have a list of the members of our delegation who came to Washington today for this annual appearance before the Congress. We ask that this list of names also be entered into the record.

For Fiscal Year 1984 we support appropriations for three projects in Georgia which influence navigation on the lower portion of the river system. These include the lakes in Dalton, Allatoona and Carters in Georgia. Farther down the river system we are requesting Operations and Maintenance (O&M) funds for four projects on the Alabama River. These projects support navigation, hydro-power and recreation from Mobile to Montgomery. We also support the Corps' request for survey money to determine how the year around reliability of this channel can be improved. For the terminus of the waterway we support O&M and survey funds to see that the Mobile Harbor will meet the future needs of the nation. In the main, our requests are comparable to those in the President's Budget Request.

Surveys	President's Budget Request	Our Request
. Alabama River below Claiborne L&D, AL	$ 459,000	$ 459,000
. Dalton Lake, GA (Flood Control)	190,000	190,000
. Mobile Harbor Deepening	700,000	700,000
Operation and Maintenance		
. Alabama River (including Claiborne L&D), AL	4,443,000	5,500,000
. Robert F. Henry L&D (was Jones Bluff), AL	2,423,000	3,500,000
. Millers Ferry L&D, AL	2,963,000	4,200,000
. Mobile Harbor, AL	3,893,000	5,500,000
. Allatoona Lake, GA	4,001,000	4,001,000
. Carters Lake, GA	2,012,000	2,012,000

Recently we were alerted not to expect appropriations for continued design and engineering of the Coosa River Navigation Project until certain matters have been resolved. We were disappointed but the announcement was not entirely unexpected. Looking at the national scene, one can see the obstacles in the way of any new construction start at the present time. The economic picture is still very uncertain. The requirement to add an annual inflation cost of 8% to the cost of the Coosa Project between 1981 and 1983 is very troublesome and the Administration has refused to exercise the option to include significant regional benefits in justifying the project. This option was provided by the Congress in Section 140 of the Water Resources Development Act of 1976. (P. L. 94-587.).

We are also aware that preconstruction planning, which was made possible by funds originating in this Subcommittee, has progressed to a point where construction on the Coosa Project could start at any time. The U. S. Army Corps of Engineers met their assigned date of this month, March 1983, to be ready to let the first construction contract. As long as no appreciable time would be lost once a decision is made to proceed, it makes sense to suspend further pre-construction planning at this time. For these reasons we do not request appropriations for the Coosa Project for FY84. We have more to say about the Coosa Project later in this statement.

Among our supporting statements are several from shippers and operators on the Alabama River. Within our Association we maintain a standing Navigation Advisory Committee made up of twenty-five such members. They are concerned with the continued threat to impose higher user taxes on the waterways. Last year this threat was made in the President's Budget Request with a proposal to withhold $150 million in Operations and Maintenance money. We are grateful that the Congress rejected this idea so emphatically. As a result, this year we find the Budget Request includes the money for maintenance dredging. The Federal government must honor an implicit contract to maintain the navigation channel on behalf of the local public and private interests who have invested millions of dollars in facilities along these waterways.

The Committee members are aware that the issue is still not settled. This year there is a shortfall in the President's Budget Request of some $454 million with the message that the Administration will submit legislation to allow the collection of fees to recover the shortfall amount. If successful, this would add an additional tax to the present fuel tax on marine fuel which is scheduled to go up to 8¢ a gallon in October 1983.

On this issue of increased fuel taxes we indorse the argument made by the waterway industry. First, fuel costs are a major expense in the towing industry and the cost of additional taxes on fuel or user fees would be paid by the shippers and eventually the consumer in higher prices. The beneficiaries of the waterways are the consumer public, not the waterway operators. The Committee has heard the recession has hit the towing industry hard. The 8¢ fuel tax alone will add to their economic problems. The main point, however, is that applying cost recovery taxes to one competing mode while not doing so for the railroads will force traffic off the waterways to less efficient means of transportation.

The towing industry does not reject the notion of cost recovery, provided that an accurate allocation of the costs of a waterway be made among navigation, flood control, recreation and hydro-power. A second provision is that the Federal costs incurred on behalf of the other, competing modes of transportation must be similarly identified and allocated. The Committee is aware of the long history of gifts, concessions and subsidies to the railroads which go back to the significant land grants of the mid-nineteenth century. These costs should also be recovered if the policy is to be fair and equitable. Until this is done, we join the waterway industry in resisting additional taxes or fees which we understand aim for as high as 60 to 70% recovery.

Our request for Operations and Maintenance (O&M) funds for the four navigation related facilities, Alabama River, Robert F. Henry, Millers Ferry and Mobile Harbor exceed the amounts in the President's Budget. Our requests more closely approximate the Corps of Engineers capability for additional work needed to keep these facilities in top working condition. We feel that prompt periodic maintenance of these facilities can do much to preclude the suddenness and unexpectedness of the "infrastructure" problem which has gained such wide spread publicity.

Two of the navigation facilities, Robert F. Henry and Millers Ferry and the two existing projects in Georgia include hydro-electric generating capability. This capability proved to be invaluable considering the high cost of other forms of energy. Allatoona Lake and Carters Lake are located on the headwaters of the Coosa-Alabama waterway system. In addition to hydropower, the storage in these magnificant reservoirs is available to even out the navigation depths downstream on the Alabama River. Similarly, the proposed Dalton Lake reservoir is a multipurpose project which will provide flood control, a needed supply of water for the local area and have a beneficial impact on downstream navigation.

We are supporting the Corps' request for study money for the Alabama River ($459,000) to see what needs to be done to improve the reliability of the channel. Similarly, we support the study money proceeding toward making the Mobile Harbor a deep water port.

Interesting developments on the Alabama River show how waterways develop and become increasingly valuable once they are built. When the Alabama River Project was being planned in the early 1960's the anticipated Benefit to Cost Ratio was 1.08 to 1.0. Seven years after completion of the project the B/C ratio was already 1.9 to 1.0 with 2.01 million tons shipped. The official tonnage for 1981 was 2.2 million, the highest in the first ten years of the project. The 1981 record came despite a very dry year which had an inordinately large number of days below the 9 ft. project depth. Official 1982 tonnage is not yet available but we estimate another substantial increase. The Scott Paper Company in Mobile is completing an extensive plant modification wherein 70% of their wood will come in by barge. Two new tow boats and a fleet of barges have been purchased and over one million tons of new traffic will be added in 1983.

Since our appearance before this Committee we have also had our first inbound "Seabee" barge in Montgomery, AL, with overseas cargo - a livestock feed supplement produced in Spain - loaded on barges in Rotterdam. When barges are economically transported by ship to New Orleans and pushed to Montgomery the advantages of water transportation are clearly evident. The Alabama River Project has also spawned a boat building industry. Currently an excursion boat, "The Fair Lady" is being built near Montgomery, AL for use on the Potomac River. It is scheduled to proceed on its own power via the Alabama River and the intra-coastal waterway for delivery in Washington, D. C. in early summer. "The Fair Lady" is modeled after the General Richard Montgomery, a riverboat now featured in Alabama's capital city.

Now back to the Coosa River Navigation Project. We want to assure the Committee members that we have not abandoned our aspirations for a fully developed waterway from Rome, Georgia to Mobile. You can expect us back again and again to speak up for what is one of the few remaining opportunities to extend our inland waterway navigation system. The economic picture does have a considerable impact on the benefits which are projected. When the economy starts moving again we fully expect future traffic surveys will show increased shipping activity. For example, over the four years period between traffic surveys for the Coosa Valley (April 1975 to March 1979), the tonnage projected showed an increase of 59%. The anticipated economic recovery could bring another dramatic rise in the tonnage estimates. These estimates bear directly on the National Economic Development Benefits projected for the Coosa Project.

At the same time we continue to be motivated by the significant regional benefits anticipated. According to the results obtained from the new and more rigorous econometric techniques used to project the Regional Development Benefits, these benefits alone can justify even the increased cost. These are the new techniques used by the Corps to answer a 1981 request for an updated look at the economic justification for the project. Three independent estimates came up with these substantial regional benefits. We understand that the results are increased ten-fold when a more reasonable "moderate" level of local effort to attract industry is assumed.

We continue to argue that the cost sharing policies proposed by the Administration constitute a significant departure from longstanding public policy, a policy which contributed greatly to the nation's economic strength. The new proposals would alter the Federal investment pattern needed for the future. There always has been and there should continue to be a strong regional component of benefits from public works, and these benefits should "count".

The Coosa Valley Corridor is located in the Appalachian Region. Income is lower than the U. S. average and unemployment is traditionally, not just currently higher. The per capita income has ranged from two-thirds to four-fifths of the national average, starting in 1950. In 1970 unemployment was 24% higher than the national average and 20% higher in 1980. The Coosa Project would have a positive impact on this underdeveloped area.

Regional Development Benefits are rejected by some on the basis that benefits in employment and personal income to one region necessarily means a corresponding loss to some other parts of the nation. By definition this erroneously assumes complete economic interdependence that sums to zero for the nation as a whole. Another questionable assumption, particularly at this time, is that we have in the U. S. a growing, full employment economy. Obviously this is not true for the present. It may never again be true for the types of heavy or "smoke stack" industries that benefit most directly from water transportation.

We agree, although reluctantly, that this is not the time to expect a new construction start on the Coosa Project. It was 82 years after our Association was founded before the channel was opened to Montgomery in 1972. William Patrick Lay, Association founder wrote to a member of Congress in 1902 proposing locks on the Coosa River. Referring to an enclosed map, he wrote "... refer to it as often as you desire, and hoping that the importance of the Coosa River may be properly appreciated, and that we may get an appropriation commensurate with the stream, I am, very respectfully," - Gadsden, AL February 10, 1902.

We appreciate the opportunity to appear before this distinguished Subcommittee. We know that you will consider our requests. We will continue to speak out on behalf of the entire waterway from Mobile to Rome, GA, working to stimulate growth of the Alabama River stretch, and laying the groundwork for the time when it is time to start building again.

COOSA-ALABAMA RIVER IMPROVEMENT ASSOCIATION'S DELEGATION APPEARING BEFORE THE SENATE SUBCOMMITTEE ON APPROPRIATIONS FOR ENERGY AND WATER DEVELOPMENT HEARINGS, 2 P.M., MARCH 23, 1983

1. Chris H. Heinz, President CARI Association, Selma, Ala.
2. Hon. Bill Baxley, Lieutenant Governor, State of Alabama, Montgomery, Ala.
3. Hon. Jamie "Red" Etheredge, Director, Alabama Development Office, Montgomery, Ala.
4. Harold F. Hunter, Jr., businessman, Rome, Ga.
5. Sid Willingham, insurance and real estate, Rome, Ga.
6. B. A. Reynolds, Selma and Dallas County Chamber of Commerce, Selma, Ala.
7. H. Edwin Holladay, Circuit Judge, 30th Judicial Judicial Circuit, Pell City, Ala.
8. Ellis Austin, businessman, Wetumpka, Ala.
9. Joel Barfoot, Montgomery County Commissioner, Montgomery, Ala.
10. Forrest Walls, Councilman, Pell City, Ala.
11. J. Wallace Tidmore, Alabama Public Service Commission, Montgomery, Ala.
12. Melvin Curlee, Elmore County Commissioner, Wetumpka, Ala.
13. Judge Hoyt B. Hamilton, retired, Pell City, Ala.
14. Mrs. Hoyt B. Hamilton, housewife, Pell City, Ala.
15. D. J. Petruccelli, Executive Vice President, Greater Gadsden Chamber of Commerce, Gadsden, Ala.
16. Wendell Bryant, Etowah County Commissioner, Gadsden, Ala.
17. Lawrence L. Merrihew, Ind. Dev. Dept., Merchants National Bank, Mobile, Ala.
18. Carl A. Torbert, Jr., President, Radcliff Materials, Inc., Mobile, Ala.
19. C. R. Carlson, Executive Vice President, CARI Association, Montgomery, Ala.
20. 25. Walter B. Stevenson, Jr., Office of State Planning and Federal Programs, Montgomery, Ala.
21. James D. Corley, Judge of Probate, Autauga County, Prattville, Ala.
22. N. A. Nicolson, Ideal Basic Industries, Mobile, Ala.
23. Marrion B. Rambeau, Mobile Area Chamber of Commerce, Mobile, Ala.
24. E. G. "Buddy" Browning, Jr., Alabama State Docks, Mobile, Ala.
25. Sheldon L. Morgan, Merchants National Bank, Mobile, Ala.
26. Nick Barchie, Warrior and Gulf Navigation Co., Chickasaw, Ala.
27. Tim Parker, Jr., Parker Towing Co., Tuscaloosa, Ala.
28. Julian H. Smith, Jr., Alabama Power Co., Birmingham, Ala.
29. Richard Fifield, Alabama Farm Bureau, Montgomery, Ala.
30. Ada W. Paravicini, administrtive assistant, CARI Association, Montgomery, Ala.
31. Jamie Jordan, businessman, Centre, Ala.
32. John Gibbs, Cherokee Co. Comm., Centre, Ala.
33. Charles Young, Cherokee Co. Comm., Centre, Ala.
34. Judge Otha Lee Biggs, Judge of Probate, Monroe County, Monroeville, Ala.
35. Charlie Deer, tax collector, Monroe County, Ala.
36. Ken Chesnut, Councilman, Camden, Ala.
37. Phil Tate, contractor, Camden, Ala.
38. Harold D. King, President, Peoples Bank, Pell City, Ala.
39. Judge Conrad M. Fowler, public relations/Pepperell, Lanett, Ala.
40. Mrs. James D. Corley, housewife, Prattville, Ala.

LIST OF STATEMENTS REQUESTING APPROPRIATIONS FOR FISCAL YEAR 1984 FOR PROJECTS ON THE ALABAMA-COOSA RIVER SYSTEM.
SUBMITTED FOR RECORD AND FILE OF THE SENATE SUBCOMMITTEE ON APPROPRIATIONS FOR ENERGY & WATER DEVELOPMENT HEARINGS 2:00 P. M.-MARCH 23, 1983.

1. Coosa-Alabama River Improvement Association, Inc., Montgomery, AL

2. Governor's Office, State of Alabama, Montgomery, AL

3. Alabama Development Office, State of Alabama, Montgomery, AL

4. Alabama State Docks Department, Mobile, AL

5. Ideal Basic Industries, Mobile, AL

6. International Paper Company, Mobile, AL

7. Mobile Area Chamber of Commerce, Trade & Transportation Department, Mobile, AL

8. Radcliff Materials, Inc., Mobile, AL

9. Warrior & Gulf Navigation Company, Chickasaw, AL
10. P&S Marine Building & Repair Company, Theodore, AL
11. Farmers Liquid Fertilizer, Inc., McCrory, Arkansas
12. Mississippi Chemical Corporation, Yazoo City, Mississippi
13. Parker Towing Company, Inc., Tuscaloosa, AL
14. Vulcan Materials Company, Birmingham, AL
15. DISCO Products, Selma, AL
16. Alabama Metallurgical Corporation, Selma, AL
17. Dallas County Commission
[redacted], Selma, AL
18. City of Montgomery, Emory Folmar-Mayor, Montgomery, AL
19. Alabama Tombigbee Regional Commission, Camden, AL
20. Montgomery County Commission, Montgomery, AL
21. Montgomery Area Chamber of Commerce, Montgomery, AL
22. First AL Bancshares, Inc., Montgomery, AL
23. Ballard Realty Companies, Montgomery, AL
24. Anne Tidmore Flags/Flagpoles, Anne Henry Tidmore-Owner, Montgomery, AL
25. Wallace Tidmore, Montgomery, AL
26. Autauga County Commission, Prattville, AL
27. Bank of Prattville, AL
28. Austin's Flowers/Ellis Austin-Owner, Wetumpka, Alabama
29. Probate Court, Chilton County, Clanton, AL
30. Jasper Fielding, Judge of Probate, Coosa County, Rockford, AL
31. Greater Talladega Area Chamber of Commerce, Talladega, AL
32. City of Pell City, Hugh H. Williamson, Mayor, Pell City, AL
33. Etowah County Mayors Association, Gadsden, AL
34. Etowah County Commission, Gadsden, Alabama
35. The Goodyear Tire and Rubber Company, Gadsden, AL
36. The L. Lee Sledge Agency, Gadsden, AL
37. St. Clair County Commission, Ashville, AL
38. Hoyt B. Hamilton, Retired Probate Judge,(Resolution), Pell City, AL
39. Judge H. E. Holladay, Pell City, AL
40. Town of Ragland, Ragland, AL
41. Rome Area Chamber of Commerce, Rome, GA
42. Monroe County Commission, Otha Lee Biggs, Chairman, Monroeville, AL
43. Monroeville Area Chamber of Commerce, Monroeville, AL
44. Alabama Farm Bureau Federation, Montgomery,AL
45. The Merchants National Bank of Mobile, Mobile, AL

46. Union Bank & Trust Company Montgomery, Al.
47. The Greater Gadsden Chamber of Commerce, Gadsden, Al
48. Willingham-Nelms Insurance Agency, Rome, Ga.
49. Rome News-Tribune, Rome, Ga.
50. Floyd County Board of Commissioners, Rome, Ga.
51. National City Bank of Rome, Rome, Ga.
52. Scott Paper Company, Mobile, Al.
53. City of Wetumpka, Ala.
54. Tate-Heinz & Ellis, Inc.

STATEMENT OF ROBERT M. HOPE, DIRECTOR, ALABAMA STATE DOCKS DEPARTMENT

It is a pleasure to appear before this Committee along with other Alabamians in support of navigation of the Alabama and Coosa Rivers. The Alabama River connecting the heart of Alabama to the Gulf Port of Mobile and the Gulf Intercoastal Waterway is an integral part of the national Inland Navigation System.

The River System provides an economical and energy effective method of transporting products and materials to and from the various regions of this nation. It allows our farmers as well as commercial and industrial interests an economical method of producing the products we all know for nourishment and sustains a good standard of life for all our citizens.

The national Inland Waterway System provides a major conduit for export and import of raw materials, finished products, and the food and fibre we use and sell. It assists us greatly in the balance of trade with other nations. The Inland Waterway System provides transportation of materials and products at the lowest cost possible to the deep water ports such as Mobile and allows the United States to be competitive in world markets.

I join with members of the Coosa Alabama River Improvement

Association here today in full support of the request for funding of full time operation and the necessary maintenance of the existing navigation system on the Alabama River.

This Waterway has proven in its short life to be cost effective. Each year additional materials and products move on this System and with the completion of the Tennessee-Tombigbee Waterway the navigation of the Alabama River will be even more important.

The State of Alabama has expended millions of dollars in support of navigation of this System by providing the nonfederal support required. The Alabama State Docks Department has expended within the last six years approximately $250 million in renovations, refurbishing and new construction projects at the terminal port to place itself in a position to handle increased cargoes entering and exiting the Port which have had previous and subsequent movement on the Inland Waterway Systems of Alabama.

In concert with the Coosa/Alabama River Improvement Association and the Governor of the State of Alabama we support the continued full funding of this vital navigation project. The Inland Navigation System is an integral part of the national transportation system of the United States which the State of Alabama as well as other States and private enterprise have invested large sums of money over the years and the total impact of these water transportation corridors on the continued vitality of our nation should never be under estimated.

STATEMENT OF HUGH H. WILLIAMSON, MAYOR, PELL CITY, ALA.

We, representing the City of Pell City, Alabama, request your support of the testimony of Coosa-Alabama River Improvement Association, including allocations of construction money to start the Coosa River Navigation Project - the design of this project having been ready for a starting date of March 1983. This part of the testimony is particularly important to citizens of Pell City and the St. Clair County area. General preparations for industrial growth which would result from navigation on the Coosa River has been taking place in Pell City over a period of years. The City has, over the last ten years, purchased some 300 acres of land for industrial development and has provided streets, installed water, and is currently installing sewer and sewer treatment facilities to take care of this development. The City has worked hard to obtain a Class 3 fire rating classification and was instrumental in the organization of a city school system in an effort to provide better educational opportunities. The development of the river system is important to Pell City, its citizens and its future industrial development.

Also important to our citizens is the continued development of the river system including operation and maintenance of the Alabama River, :including the locks and dams at Claiborne, Millers Ferry and Robert F. Henry; operation and maintenance of the important upstream reservoirs and hydropower plants at Allatoone and Carters Lake in Georgia; operation and maintenance of the hydropower stations on the Alabama River at Millers Ferry and Robert F. Henry; and maintaining and improving the Mobile Harbor.

Development of the river system and the navigation project are important to our area and we respectfully request that you support the program.

STATEMENT OF G. TRUMAN WELCH, MAYOR, WETUMPKA, ALA.

Wetumpka is unique in that people who work in Montgomery profit from the existing waterway and have a real interest in extending up the Coosa River. The City of Wetumpka is very pleased that the Alabama River has already proven to be a worthwhile investment. There is also a possibility of traffic to Wetumpka by river in the very near future and the using of locks on the Coosa River that have not been used in many, many years.

Wetumpka, Alabama is the threshold of the Coosa River project and we are aware of the number of products that can be exported from the area. Once cheaper transportation is available, this can mean a great deal to the economic future of our area.

Work on the waterway projects could bring both current employment and future benefits that would help our depressed economy. We must not let short range problems interfere with our provision for future economic strength.

The City of Wetumpka has been a member of the Coosa-Alabama River Development Association for a number of years and the Association has been very effective spokesman. We are very pleased to endorse the subcommittee testimonials of the Association.

STATEMENT OF SCOTT PAPER CO.

Scott Paper Company appreciates the opportunity to submit a statement on our use of the Alabama River system. Water transportation of raw materials is of great importance to our company and will be even more so in the future. Decisions of this Committee will therefore be very important to our company's future operation, profitability, and employee work force. Failure to provide for dredging and other projects on the Alabama River could increase our company's operating costs to the detriment of the economy of Alabama and its citizens.

Scott Paper Company in Alabama manufactures lumber, pulp and a wide variety of paper products which are shipped to markets throughout the United States. The payroll for our 4,000 employees in the Mobile, Alabama area is $108 million annually. Scott's operation in the Mobile area contributes over $1 million per day to the economy through payroll, taxes, and purchase of pulpwood and supplies.

Water transportation is used in Scott's Alabama operation to move raw material - pulpwood and logs - to manufacturing plants.

We have used water transportation of wood raw materials on the Alabama River for a number of years and are currently upgrading and enlarging our water transportation capabilities. A $80 million dollar investment in 1982-83 will result in lower operating costs which, in turn, will improve the competitiveness of our Alabama operations. By the end of this year we will barge approximately 1.4 million tons of wood on the Alabama River system to our Mobile, Alabama manufacturing plants. The $80 million investment will include modernization of our Camden and riverbank upriver woodyards and the Mobile woodyard and firststage processing equipment. A number of barges and tugboats will also be purchased in the project. Completion of the project will result in approximately 75 percent of our raw material being delivered on the Alabama River system. In the future, we may construct an additional upriver woodyard at Claiborne, Alabama.

With this additional $80 million investment in water transportation facilities, it is obvious that a well-maintained Alabama River system is critical to our company's future. Failure of the U. S. Army Corps of Engineers to dredge and carry out other projects on the Alabama River could result in higher transportation costs and negative economic pressures on the company, the economy of Alabama, and the 4,000 Scott employees.

We urge the Committee to provide adequate funding for the Alabama River system and Mobile, Alabama harbor.

STATEMENT OF D. J. PETRUCCELLI, EXECUTIVE VICE PRESIDENT, GREATER GADSDEN (ALA.) CHAMBER OF COMMERCE

First, we want to indorse the request of the Coosa-Alabama River Improvement Association for Operations and Maintenance funds for FY84. The Alabama River and the Port of Mobile are of vital importance to the total economy of our area and these facilities must be maintained.

Coming from Gadsden, the upper end of the current Coosa River Navigation Project, we naturally are disappointed that it is not feasible to proceed with the project at this time. Our community benefited from steamboat traffic on the Coosa River back in the last century, even though sailing downstream to Montgomery and on to Mobile was only a dream. Leaders from Gadsden were among the founders of the Coosa-Alabama River Improvement Association in 1890 and we have participated in the effort to make the stream navigable ever since. Over that long period there have been other stops and starts, many of them related to the state of the economy. While there are promising signs, the economy has hit our community, along with the rest of the nation, and we fully appreciate that this may not be the time to proceed with a costly investment.

Our community has a population of skilled people employed in the kinds of industries that can profit most from a navigable waterway.

We are optomistic that the significant regional benefits of the project will be recognized and included to justify the project. We will continue to work with other communities along the waterway to lay the groundwork for the time when the waterway can be built.

STATEMENT OF NORMAN A. NICOLSON, IDEAL BASIC INDUSTRIES

Ideal Basic Industries is pleased to appear before the Appropriations Subcommittee in support of the Coosa-Alabama River Improvement Association for the 1984 Budget for maintenance and continuing development of the Coosa-Alabama River system.

Ideal Basic Industries is a Denver, Colorado, corporation whose operating subsidiaries include a Potash Division and a Cement Division.

In September, 1981, Ideal's Cement Division placed a new $350,000,000 cement plant in operation near Mobile, Alabsma. The plant, one of the largest cement plants in the United States, has the annual capacity of producing 1,500,000 tons of cement which is 25% of the company's total annual production. The plant and its supporting activities employs 259 people.

The marketing area for this plant extends from East Texas to South Florida.

The 3,200,000 tons of limestone required annually by the plant as raw material originates at a quarry in Monroe County, Alabama, on the Alabama River below the Claiborne Lock and Dam.

Radcliff Materials, a subsidiary of the Dravo Corporation of Pittsburgh, under a contract with Ideal Basic Industries utilizes three tow boats and twenty barges to move this material from the quarry to the plant.

The water route from quarry to plant follows 54 miles of the Alabama River, 45 miles of the Mobile River, and 16 miles of the Mobile Bay.

Both the Mobile River and Mobile Bay are maintained at authorized project depths on a year round basis and, therefore, pose no problem to our raw material movement.

The depths available in the Alabama River follow a seasonal pattern which varies with rain fall and tributary run off. After winter floods shoals form in the lower river which restrict the available depths. In late summer and early fall there is a low water period which has lasted as much as 100 days.

On a short term basis the Corps of Engineers has been most diligent in removing the shoals as they occur.

Within its intermediate authority, the Corps continues to study the feasibility of methods to provide the authorized project depth year round.

Ideal Basic Industries was aware of the river conditions when it invested $30,000,000 on quarry facilities and contracted for the services of marine equipment valued at $10,000,000.

Ideal provided a 400,000 ton emergency stock pile of limestone at the plant to meet operational requirements during the low water season. The contracted tow boats and barges were especially designed for shallow water service and one extra tow boat and four extra barges were provided as back-up.

The cost of transporting limestone averaged $3.40 per ton in 1982. In November and December, 1982, when the project depth was available costs dropped to a $2.70 - $2.80 per ton range.

In making a sizeable capital investment in developing South Alabama and the Gulf Coast, Ideal Basic Industries with others who have made similar investments feels Congress should be committed to continue funding of the Coosa-Alabama River.

On behalf of all users of the Coosa-Alabama River system Ideal Basic Industries urges the Committee to recommend continued appropriations to fund required dredging maintenance and further studies to improve the reliability of the river.

STATEMENT OF GOODWIN MYRICK, PRESIDENT, ALABAMA FARM BUREAU FEDERATION

We wholeheartedly endorse the testimony presented by the Coosa-Alabama River Improvement Association on the pressing need for completion of the Coosa River Navigation Project and for operations and maintenance funds for the Coosa-Alabama Waterway.

We believe that to postpone the Coosa River channel extension would be shortsighted. Major economic benefits would accrue from the channel extension to Etowah County and the surrounding area. To halt this project would be to deny an opportunity for economic growth to a region of the state that has one of the highest unemployment rates in the country. The channel extension would mean jobs now to this blighted area and to other areas in the state as well as future job producing industrial and commercial growth.

The 1982 Regional Development Benefits study clearly shows this channel to be an excellent investment in the future of the Southeast. Even so, we believe that the full scope of potential benefits to be realized through increased agricultural exports and development of agribusiness operations along the river resulting from the Coosa Project were not fully taken into account in this study. The evidence of potential benefits to the economy is more apparant than ever to those who are searching for ways to restore the region's economic health. We urge you to do everything in your power to insure that the Coosa-Alabama Waterway is completed on schedule.

It is absolutely essential that adequate operations and maintenance funds be provided to keep the Coosa-Alabama Waterway operating at peak efficiency. Agriculture in Alabama is highly dependent on this transportation artery for access to the Port of Mobile and thus to export markets. Efficient export marketing systems are essential to the agricultural economy and barge transportation is by far the most economical means of access to those markets. The Coosa-Alabama Waterway traverses three fourths the length of the state, providing crucial transportation access to the region's farmers.

Agriculture's economic position has been increasingly precarious for the last several years. One factor in bringing agricultural income to new lows has been a decrease in grain exports, the first such decrease in several years. Revitalization of export markets is critical to the economic survival of America's farmers. We must not fall back now in the development and upkeep of water transportation that supports these markets.

We believe that adequate funding for the Coosa-Alabama Waterway will prove to be one of the best possible investments in the future economic strength of this region. Your vision and leadership now will help bring this about.

RESOLUTION OF ROME (GA.) AREA CHAMBER OF COMMERCE

WHEREAS, those counties lying within the basin of the Alabama River are experiencing continuous economic growth due to the current development program now underway on the river; and,

WHEREAS, many of the counties in the area of the Coosa River are also experiencing economic growth because of the Alabama Power Company's development program, and they feel this, too, will accelerate even faster when the Alabama-Coosa waterway is fully navigable from Mobile to Rome, Georgia; and,

WHEREAS, dynamic economic growth, increased hydropower and barge transportation facilities, a more productive way of life, as well as recreational enjoyment, are but a few of the numerous benefits that will accrue when this great river system is developed;

NOW, THEREFORE BE IT RESOLVED, that the Rome Area Chamber of Commerce approves testimony by Coosa-Alabama River Improvement Association for support of appropriations on the following projects:

Alabama-Coosa Rivers
Allatoona Lake
Carters Lake
Claiborne Dam
Robert F. Henry Dam
Jones Bluff Lock and Dam
Millers Ferry Lock and Dam
Mobile Harbor
Multipurpose Dam, Dalton Lake

We strongly urge appropriations representing the capability of the Corps of Engineers for Fiscal Year 1984.

Approved and adopted in regular session of the Board of Directors this 17th day of February, 1983.

STATEMENT OF EMORY FOLMAR, MAYOR, MONTGOMERY, ALA.

The City of Montgomery has actively supported the development of the Alabama-Coosa River system over the years. Our citizens have seen how the river has opened the door to international markets and brought the benefits of low-cost barge transportation to the final user of such things as agricultural products, fabricated steel, and building aggregates. Our people also recognize that the full potential of the waterway will be achieved when we extend the present channel to the industrialized communities farther up the Coosa River.

We are dedicated to a balanced Federal budget and support efforts to turn our economy around. However, expeditures to maintain and extend the waterways represent an investment in the future economic strength of the nation. The returns in efficiency and productivety are part of what we need to fight inflation. Continued development of the waterway is an opportunity to invest in the future that our nation cannot afford to miss.

I add my support to the testimony of the Coosa-Alabama River Improvement Association requesting appropriations for Fiscal Year 1984.

STATEMENT OF JAMES D. CORLEY, JUDGE OF PROBATE-CHAIRMAN, AUTAUGA COUNTY (ALA.) COMMISSION

The Autauga County Commission strongly endorses the testimony of the Coosa-Alabama River Improvement Association which will be presented on March 23, 1983. This county has been an active participant in the efforts to develop the waterway since the Association was formed and we have seen the benefits which have come from building the navigation channel from Mobile to Montgomery.

In particular we support the requests for Operations and Maintenance funds for the projects on the Alabama River and Mobile Harbor. Not only is this effort of great benefit to this area but the waterway connections to Mobile are a valuable asset to the entire nation.

While we recognize the need to postpone extending the channel along the Coosa River to Gadsden and Rome, GA we are confident that the extensive regional benefits of this project will be accepted as more than sufficient justification for the investment.

STATEMENT OF JAMES A. PIERCE, MISSISSIPPI CHEMICAL CORP.

Mississippi Chemical Corporation is a producer and shipper of chemical fertilizers. The company is a farmer owned cooperative which supplies the fertilizer needs of its approximately 20,000 stockholders.

As fertilizer is a seasonal product with very heavy demand at various periods of the year, it is necessary to have strategically placed outlying storage/distribution facilities in order to efficiently serve the needs of the company's farmer customers. As transportation costs contribute substantially to the bottom-line cost of fertilizer and as barge transportation can move large quantities more economically than other modes, storage facilities are placed at locations served by water whenever feasible. One such location was established in 1973 on the Alabama River at Montgomery, Alabama.

The Montgomery facility has a storage capacity of 22,000 tons of dry, bulk mixed fertilizers. Annual shipments to this location range from 30,000 to 45,000 tons, depending on river conditions. These shipments originate at Mississippi Chemical's Pascagoula, Mississippi production plant.

At various times during the year, navigation on the Alabama River is severely restricted due to low water, shoaling, etc. With the drop in available loading draft, tonnage sharply decreases while the per-ton transportation cost increases. Following are examples of tonnage at various drafts for a four-barge tow:

9 foot draft	6,340 tons
8 "	5,480
7 "	4,625
6 "	3,780

Therefore, continued maintenance by the Corps of Engineers to provide full authorized depth is of considerable importance to Mississippi Chemical by providing economical transportation of fertilizers to the Montgomery area.

As to waterway user charges, we feel 100% cost recovery levels would be devastating to the barge industry as well as to the general economy. The steep rise in costs would of necessity have to be passed on to the consumer, which would face stiff resistance during this recessionary period. Switches to alternate modes would be at higher freight levels, with the same resultant higher costs to delivered goods. From our company's economical standpoint, we would prefer no increase in the present surcharge levels. However, we can sympathize with the need for an infusion of additional monies into the Federal budget for O&M costs. We do feel that something less than 100% would be more feasible and ultimately be of greater benefit to the nation's economy as a whole.

Also, we do not favor segment specific charges, as they would be the death knell for many otherwise well-utilized tributaries such as the Alabama River. This would result in diversion to higher priced transportation modes with costs encompassed into the cost of product to consumers. Higher traffic rivers would also be hurt, as much of the traffic that is either originated or terminated on low volume tributaries travels for a portion of its journey over these high volume arteries. The demise of these shipments would adversely affect the benefit/cost ratio of the total system.

As outlined, the Alabama River is an important transportation link in Mississippi Chemical's delivery of fertilizers to the farmers of Alabama. We are, therefore, vitally interested in the funding for its continued operation and maintenance. In this effort, we are a strong supporter of the Coosa-Alabama River Improvement Association and join with them and other users in a collective effort to seek continued funding. Your support and efforts in this regard are earnestly solicited and appreciated.

STATEMENT OF TIM PARKER, JR., EXECUTIVE VICE PRESIDENT, PARKER TOWING CO., INC.

My name is Tim Parker, Jr., and I am Executive Vice President of Parker Towing Company, Inc. I wholeheartedly endorse and support the testimony of Mr. Ray Carlson, Executive Vice President of the Coosa-Alabama Improvement Association, and his request to you for adequate operational and maintenance funding for the Coosa-Alabama River system, and adequate funding for the Port of Mobile.

Parker Towing Company operates a fleet of one hundred thirty-five (135) hopper barges, fifteen (15) towboats and four (4) tank barges. We have been providing barge transportation service to Alabama shippers for over forty (40) years.

The Coosa-Alabama is important to the economic well being of Alabama. As an example, agricultural products, primarily soybeans, wheat and corn, move in considerable volume via the Coosa-Alabama to Mobile for export. A wide variety of items are shipped by barge on the Coosa-Alabama including not only agricultural commodities, but also iron and steel articles, petroleum and chemical products, paper and forest products, and sand and gravel, just to name a few. This diversification clearly indicates the broad economic impact that this waterway has on the health of business and commerce in Alabama.

As a member of Coosa-Alabama River Improvement Association, Inc., I respectfully request that you continue to adequately fund the operational and maintenance requirements of this river. I would also urge continued adequate funding for the Port of Mobile. The Alabama State Docks is truly one of the outstanding port facilities in this country and plays a major role in the flow of export/import traffic moving to and from not only the southeastern United States, but a very broad cross section of this country.

Statement of Hugh H. Knox, International Paper Co.

International Paper Company, as a corporate citizen, sustaining member of the Coosa-Alabama River Improvement Association, Inc. and a longtime user of the Coosa-Alabama Waterway, is vitally concerned and interested in the continued use and development of subject waterway.

Over the years, we have depended upon waterborne transportation for a significant portion of the fiber (pulpwood and wood chips) for use in the manufacture of paper and related products at two of our largest primary mills; one in Mobile, Alabama and the other in Moss Point, Mississippi. We operate a fleet of two 1600 H.P. towboats and forty-five deck and hopper barges in this service, moving approximately 200,000 tons in 1982 and 1983 plans call for in excess of that tonnage from points up to 190 miles north of Mobile on the Alabama River. Continued maintenance dredging and lock operation are a must for our continued operation on the Alabama River.

The present navigable portion of the Alabama River has proven to be a good investment showing, I understand, a Benefit to Cost ratio of 1.9 to 1.0 on just over 2 million tons in 1979. The weak economy has affected overall movements and expected growth for some period of time now but the expected upturn in the ecomony is apparently upon us and tonnage stands to increase dramatically. A revitalized construction industry alone will add several million tons by Ideal Basis (cement) the capability of which is already in place. A new G. E. plant on the Alabama River has been announced with surely more to follow if provided with assurances of a public maintained productive waterway.

We join in support of, wholeheartedly endorse, and highly recommend to you and the members of the Subcommittee on Appropriations for Energy and Water Development the testimony presented to you through the Coosa-Alabama River Improvement Association, Inc..

CURRENT STATUS OF PROJECT

Mr. Carlson. Recently, we were alerted not to expect appropriations for the Coosa River navigations until certain matters had been resolved. We are disappointed at that announcement. Looking at the national scene, one can see the obstacles in the way of any new construction starts at the time.

Among our supporting statements are several from shippers and operators on the Alabama River. Within our association we maintain a standing navigation advisory committee made up of 23 such members. Their concern with the continued threat for user taxes on the waterways is real. Last year, as you know, this threat was made in the President's budget request to withhold $150 million in operations and maintenance funding.

We are grateful the Congress rejected this. As a result, this year we find the budget request includes the money for maintenance dredging and we give you credit, sir.

The Federal Government, we feel, must honor a contract to maintain the navigation channels on behalf of the local, public, and private interests who have invested millions of dollars along these waterways.

In addition to our request for operations and maintenance money on projects to affect the Alabama River, we are supporting the Corps of Engineers for study money for the Alabama River to see what needs to be done to improve the reliability of that channel. Similarly, we supported the study money to make the Mobile Harbor a deep-water port.

One of our operations maintenance requests requires the continued maintenance of that port, which is so important to us, as well as the Tennessee-Tombigbee.

WATERWAY-RELATED INDUSTRIAL DEVELOPMENT

There are several interesting developments on the Alabama River. As you perhaps recall, we have a navigation channel from Mobile to Montgomery, and these developments show how waterways develop and become increasingly important once built. When it was being planned in the early 1960's, the ratio was 1.08 to 1, just barely over 1. Seven years after completion of the project, the ratio was already 1.9 to 1, with about 2 million tons shipped.

Other official tonnage has increased. The 1981 record was made despite a dry year there. The Stott Paper Co. in Mobile has recently remodeled its plant to accept wood fiber by barge instead of truck and train. They are now counting on [illegible] percent of their input to come in by barge. This means over 1 mill[illegible] tons of new traffic on the Alabama River, which should start in 1983.

The Alabama River project has spawned a boat industry. We were interested to find excursion boats being built on the Alabama River near Montgomery. The name of the boat is *The Fair Lady*; it is being built for use on the Potomac River right here in Washington. It will be delivered in Washington, D.C., in early summer.

The Fair Lady is modeled after the *General Richard Montgomery*, now featured in Alabama's capital city.

Just a word or two about the Coosa River project. We want to assure you we have not abandoned our aspirations for navigation from Rome, Ga., to Mobile. You can expect us back again and again to speak up for one of the few remaining opportunities to extend our waterway systems. The economic picture does have a considerable impact on the benefits which are projected and during this recession, of course, those benefits have decreased while the cost has increased.

We continue to be motivated by the significant regional benefits indicated. According to the results obtained from the new techniques used to project the benefits, these benefits alone can justify the increased costs.

We understand that the results can be increased tenfold by more reasonable moderate level of local efforts to attract industry. This, of course, is why we are pleased to have the director of our Alabama Development Office with us, because it is his office that spearheads new industry into the area, in addition to the waterways available.

We agree, although reluctantly, this is not the time to expect the construction start. It was 82 years after our association was founded before the channel was opened to Montgomery in 1972, and we can expect, perhaps, there will be other stops and starts before we finish the waterway all the way to Rome, Ga., but we will continue to work on it.

We certainly appreciate, sir, the opportunity to appear before you today, and this completes our prepared statement.

Senator COCHRAN. Thank you, Mr. Carlson. I want to express appreciation to Governor Baxley, Mr. Heinz, and you, Mr. Carlson, for being here to present this testimony to the committee.

EMPLOYMENT IMPACT

I wonder what the impact will be on jobs, employment, or economic well-being of the region if the requested funds for operation and maintenance are not made available this year as requested by the administration?

Mr. CARLSON. It would be considerable sir. We have a lot of people depending on the fertilizer that comes up that waterway now—farmers in the Montgomery area benefit from this. We have a number of industries, of course, that are using the waterway. The pulpwood industry is using it, the gravel that is being dredged off the bottom of the river is important. We have a new limestone quarry in Monroe County that is shipping the largest bulk of cargo on the waterway going to a large cement plant in the Theodore area, near Mobile.

The impact would be considerable, sir, if we did not have that.

Senator COCHRAN. If you could provide a letter to the committee for our record, which estimates job loss or other adverse economic impact that would result from failure of the Congress to provide these adequate maintenance funds, that would be helpful in making sure that we had some evidence convincing others who may be in doubt about the need for these funds.

Mr. CARLSON. We will do that sir.

Senator COCHRAN. And could you provide similar information on the jobs that would be lost as a result of the failure of the Congress to come forth with adequate maintenance funds? That would be helpful to us.

Mr. CARLSON. We will provide that.

Senator COCHRAN. Thank you again, gentlemen, for being here; we appreciate the benefit of your testimony and your presentation.

Mr. HEINZ. Mr. Chairman, we thank you very kindly.

Senator COCHRAN. Thank you.

[The information follows:]

JOBS IMPACT

We estimate 4,000 jobs would no longer be available. This estimate was made when the unemployment rate for Alabama already ranged between 15 and 16.7 percent.

The estimate was obtained by relating the tonnage moved on the Alabama River to the associated employment. To establish the applicable relationship, we used the results of a study of 206 industries which located or expanded their operation on the Arkansas Waterway between 1970 and 1979. The industries employed over 36,000 personnel. A finding from this study was that the average tons shipped or received for each employee by the barge transport mode per year was 60 tons. (The comparable figures for rail and truck were 91 tons and 124 tons, respectively.) Because traffic on the Alabama River includes such a high proportion of bulk materials (i.e., gravel, limestone, and wood products), we conservatively estimated 20 times the relative factor of 1,200 tons per employee.

Using the latest official tonnage figure of 2.16 million tons on the Alabama River for 1981, we divide by 1,200 to obtain an estimate of 1,800 directly associated jobs. To find the number of secondary or supporting jobs we used the multiplier factor of 1.3 which was used by the Corps of Engineers in the "Regional Development Benefits Study: Coosa River, April 1982" (table 13). The total of the direct and secondary jobs is 4,140. At an average annual income of $20,000 per employee, 4,140 jobs amounts to an annual payroll of more than $80 million. In this estimate, no Corps or Coast Guard personnel and no O&M contractor personnel were included.

From a sample of the principal users, we obtained confirming estimates and also forecasts of other detrimental effects from closing the river. For example, Ideal Basic Industries reported that to find the quality and quantity of limestone needed for their cement plant (3 million tons per year are projected), Jamaica and the Yucatan Peninsula of Mexico are the best alternatives. Ideal would hesitate to make capital investments in the Caribbean basin. Without a limestone source, importing semi-manufactured clinker from Spain is an alternative. Using clinker would shut down the kiln operation and the supporting raw material system at the main plant and leave only 60 workers required from a work force of 260.

May we take this opportunity to express our appreciation for the courteous reception given to our delegation. We also appreciate being scheduled to testify on the same day as the House subcommittee appearance. We applaud the stand taken by the Congress last year when the $150 million in O&M funds was restored after being withheld from the President's budget.

In closing, may we repeat our view that the Federal Government has a primary responsibility to maintain and operate the waterways, a responsibility as old as the Republic itself.

PREPARED STATEMENTS FROM MEMBERS OF CONGRESS

Senator COCHRAN. I also want to include in the record at this point prepared statements of Congressmen Edwards, Shelby, and Dickinson, which support the Coosa-Alabama projects.

[The statements follow:]

STATEMENT OF REPRESENTATIVE JACK EDWARDS OF ALABAMA

Mr. Chairman, it is a pleasure to appear here today to request fiscal year 1984 appropriations for a number of projects of vital concern in the Mobile Bay area.

As you know, the Mobile Harbor Channel Deepening Study is presently stalled in the Office of the Secretary of the Army pending some type of local cost-sharing agreement. The State has, by constitutional amendment, allocated $50 million from its oil and gas lease profits for the project. Officials of the Alabama State Docks, the project sponsor, and the Corps of Engineers are working diligently to develop a feasible alternative to the current proposal. I am confident that an agreement will be reached. In the meantime, though, it is necessary that we continue to fund the Corps' full capability for continued planning and engineering of the Mobile Harbor Channel Deepening project. That funding level is $900,000, as opposed to the President's budget request of $700,000. I urge your approval of the full capability. This work will enable the Corps to proceed at the appropriate speed and will, I believe, allow for a solution that will represent a cost saving in the long run. For operation and maintenance in Mobile Harbor, the President has requested $3.893 million. The Corps' capability is $7.287 million and I request your consideration of that amount.

The flood control survey on the Three Mile Creek has progressed to the Board of Engineers for Rivers and Harbors and will, I fully believe, meet with approval. The Corps has asked that the project be included in this year's water resources authorization bill, should one come to fruition. The project recommendations should meet with the cost-sharing objectives of this administration. I hope the Three Mile Creek flood control project will be eligible for appropriations in fiscal year 1984 and, if so, I trust the committee will fund it at an adequate level. The Corps of Engineers has a $600,000 capability for continued planning and engineering for Three Mile Creek which has not been recommended in the President's budget. Mr. Chairman, a great many of my constituents live in constant fear of flooding and a large number of people have worked hard to solve the problem in an expeditious manner. I ask that the Corps' capability for continued planning and engineering be funded so that the project may move forward.

A resolution authorizing a study of the feasibility of deepening the Bayou La Batre Channel was approved in 1974 but has yet to be funded. The coastal area of Alabama has experienced a great deal of oil and gas exploration activity in recent years and this increased activity has further pointed to the need for this channel improvement. An $80,000 funding level is needed to initiate the Bayou La Batre Channel Deepening Study in fiscal year 1984, and I ask for your full consideration of this study.

Most of our needs in the Mobile area have to do with vital ongoing maintenance activities. Our major industries in the Mobile area, as well as commerce from other areas of the nation, are dependent on an efficient waterway system for the transportation of goods. Commercial and recreational fishermen depend on having access to fishing areas in authorized channels, in Mobile Bay and in the Gulf, and they depend on having reliable access to safe harbors. These are just a few reasons why maintenance activities are so important. I urge the Committee's consideration of the Corps' full capability on these projects: Bayou Coden, $225,000; Bayou La Batre, $994,000; Gulf Intracoastal Waterway, $4.645 million; Bon Secour, $520,000; Dog and Fowl Rivers, $565,000; Fly Creek in Baldwin County, $189,000; and Perdido Pass, $200,700.

Thank you again, Mr. Chairman, for allowing me to testify in support of these projects.

STATEMENT OF REPRESENTATIVE WILLIAM L. DICKINSON OF ALABAMA

Mr. Chairman and members of the Committee. The navigable rivers of the Southeast are a necessary part of a national waterway system, and all parts of the system contribute to the whole. The integrity of this system must be maintained to permit the forces of competition to operate and make it possible to achieve national goals related to agriculture, energy, regional development and national defense.

Mr. Chairman, I realize the distinguished Chairman of the Subcommittee has temporarily put on hold, plans for new construction on the Coosa portion of the Coosa-Alabama system. This decision is understandable based on the nation's current economic condition, the deficit situation of the federal treasury, and recent cost-benefit data developed by the Corps of Engineers.

However, I firmly believe that in the not-too-distant future, when economic conditions improve and new, more realistic cost-benefit data are developed, it will again become clear that construction of the Coosa portion of this system is logical and fully justified.

In the meantime, it is necessary that we continue to provide operations and maintenance funds needed to keep the Alabama River portion of the system in top shape. Traffic on the Alabama reached more than five million tons in 1982 with Ideal Basic Industry alone shipping approximently three million tons per year. Many companies, farmer cooperative organizations, and other businesses have made investments in the hundreds of millions of dollars based on continued use of the Alabama and Coosa-Alabama system.

We therefore, request the following funds for O & M for the Alabama part of the system:

Surveys	President's Budget	Our Request
. Alabama River below Claiborne L & D, AL	$ 459,000	$ 459,000
. Dalton Lake, GA (Flood Control)	190,000	190,000
. Mobile Harbor Deepening	700,000	700,000
Operation and Maintenance		
. Alabama River (including Claiborne L&D), AL	4,443,000	5,500,000
. Robert F. Henry L&D (Was Jone Bluff), AL	2,423,000	3,500,000
. Millers Ferry L&D, AL	2,963,000	4,200,000
. Mobile Harbor, AL	3,893,000	5,500,000
. Allatoona Lake, GA	4,001,000	4,001,000
. Carters Lake, GA	2,012,000	2,012,000

In addition to enhancing navigation, four of the six O & M projects include hydro-electric generating capability which has proven invaluable with the high cost of energy. This year provision for dredging is included in the President's budget, thanks to the firm stand taken by the Congress last year. The Corps of Engineers' capability figures reflect additional work needed to enhance the inland waterway system and the Port of Mobile. Mobile harbor must be maintained at full efficiency and be prepared to take deep draft ships as soon as possible. The Dalton project is needed for industrial development and will provide storage reserve for navigation depths.

Mr. Chairman, The Coosa-Alabama has a direct effect on 18 counties and 21 municipalities along the waterway from Mobile, Alabama to Rome, Georgia, many of which are in my Congressional District. As the Chairman has already publicly said, when new data and possible alterations of the Coosa project indicate a positive regional and national cost-benefit--which I firmly believe will be the case--I believe it will be in the vital interests of our nation to again put the Coosa back on the front of our nation's waterway projects. I want to thank the Chairman and members of the Committee for so gratiously permitting me to testify for this project today.

Thank you.

STATEMENT OF REPRESENTATIVE RICHARD C. SHELBY OF ALABAMA

Mr. Chairman, I am grateful for this opportunity to appear in behalf of the Alabama-Coosa River system, a system that has already meant much to the growth of Alabama and will continue to be one of the keys to future economic development of the State.

A total of $24,713,000 in operation and maintenance funds has been requested for fiscal year 1984 for upkeep and improvement of the system. These requests include $5.5 million for the Alabama-Coosa River system as a whole, $3.5 million for the Robert F. Henry lock and dam, $4.2 million for the Millers Ferry lock and dam, $5.5 million for Mobile Harbor, $4,001,000 for Allatoona Lake, and $2,012,000 for the Carters Lake navigation project.

Surveys totaling $1,349,000 have been requested. The first survey at Dalton Lake, Dalton, Ga., on the headwaters of the Coosa, would provide information on needed storage water to maintain navigation depths on the lower Alabama River. The second survey at Mobile Harbor is needed to see if it is feasible to take deep-draft ships. The third survey is to study the Alabama River below Clairborne, Ga.

This waterway project is a solid investment in future productivity and economic progress, because by connecting Gadsden, Ala., and Rome, Ga., with the Gulf of Mexico, it is projected that the completion of all projects currently on line will make this waterway of service to more than one-half of Alabama's citizens directly. The spinoff of economic benefits cannot be underestimated.

Congress is currently in the process of serious budget scrutiny, which in many cases is long overdue. I am hopeful, however, that Federal support for the Coosa River project will withstand the inspection of the most budget conscious among us. By completing this navigational system, Congress will have helped connect Alabama with inland waterway systems nationwide. As we face increasing energy costs and potential fuel supply disruptions, it makes the most obvious sense to put Federal dollars behind the most energy-efficient transportation mode around.

Again, Mr. Chairman and members of the committee, I appreciate the opportunity to appear before this distinguished committee on behalf of the Coosa-Alabama River system, and I urge you to continue funding at the fullest possible extent of this vital State waterway project.

WARRIOR-TOMBIGBEE WATERWAY

STATEMENT OF O. S. NICHOLS, JR., EXECUTIVE VICE PRESIDENT, WARRIOR-TOMBIGBEE DEVELOPMENT ASSOCIATION

Senator COCHRAN. We next have the Warrior Tombigbee Waterway Association; Mr. Nichols is the association vice president.

Mr. Nichols, you are in charge of this entire group here, I will leave it up to you to keep order and allocate the time and recognize those, introduce them.

Mr. NICHOLS. Thank you very much, Senator. I would like to introduce those at the table with me. We have Steve Still from Birmingham, Sheldon Morgan from Mobile, Lt. Gov. Bill Baxley, and Bob Worshly from the Southern Company Services.

Mr. Ethredge is still here with us, and Walter Stephens, Carl Orbit, and Marion Rambeau from the Mobile Chamber of Commerce, so we have a group of diehards and we appreciate your staying.

Senator COCHRAN. I am sorry we have run over our time and caused the hearing to be delayed so much, but these votes are important.

Mr. NICHOLS. Let me defer to Lieutenant Governor Baxley.

STATEMENT OF WILLIAM J. BAXLEY, LIEUTENANT GOVERNOR OF ALABAMA

Mr. BAXLEY. Mr. Chairman, I have some written remarks from Governor Wallace and myself. I would like to enter them into the record at this point; it would shorten the proceedings.

That is a different project from the others we have talked about, because this is not something that is planned, not something we are looking at down the road. This is a system of survival that is working now; it is not only important down the line, this is important now for things like balance of payments, exporting agricultural products through the Port of Mobile, southern coal and ore, and other things exported, if something should happen where this waterway would not be usable, then I think it would greatly affect not only the economy of our area, but the national economy.

TRAFFIC PROJECTIONS

Not only is this system being used now, but traffic on this system is growing at a rate of five times what the average increase is on other waterways throughout the country.

Last year they had 1980 statistics and it is nearly 18 million tons of traffic that year, and it is continuing to increase. That was an increase of 10 percent over what was done the previous year, and the national average for tonnage shipped by waterway increased only 2 percent.

I think it is covered in the statements. This is a project that, like I say, is not something we have got to talk about that may benefit 10 years from now or 20 years from now or even 3 years from now; this is something that is ongoing. The impact on the jobs is there right now, and we certainly hope that the committee will see fit to fund what has been asked, and we feel we will be treated fairly by the committee.

[The statement follows:]

STATEMENT OF GOV. GEORGE C. WALLACE AND LT. GOV. WILLIAM J. BAXLEY OF ALABAMA

Mr. Chairman, I want to thank you for the opportunity to appear before this subcommittee today, along with my fellow Alabamians, in support of the Black Warrior-Tombigbee Waterway. I am pleased to state our strong and continued support for a fully funded operation and maintenance program requested by the Corps of Engineers for the Black Warrior-Tombigbee Waterway. Also, I request that you support the provision of additional funds in the survey classification which would permit the Corps of Engineers to continue the planning and engineering of the Oliver lock replacement.

The Black Warrior-Tombigbee Waterway is the most advanced and efficient of Alabama's inland waterways. It is linked to world markets via the Port of Mobile, and in 1985 will be linked to all of mid-America and the Great Lakes via the Tennessee-Tombigbee Waterway. During 1980, tonnage on the Black Warrior-Tombigbee Waterway increased over 1979 by over 10 percent. The Black Warrior-Tombigbee Waterway provides efficient transportation for approximately 80 percent of Alabama's coal which is exported through the Alabama State docks at Mobile and for the grains shipped by farmers to Mobile from 21 Alabama and Mississippi counties. Other important commodities such as ore, steel, forest products, petroleum, chemicals, and aggregates move on the Black Warrior-Tombigbee Waterway to the gulf and the intracoastal waterway enroute to other parts of the Nation and the ports of the world.

Approval by Congress of $9.8 million for the operations and maintenance program is necessary to insure full-time operation of this waterway. This should be adequate for a year of average rainfall and generally normal water levels. Tonnage has grown from 8 million tons in 1966 to 16.8 million tons in 1980. It is vital to the region and the Nation that this waterway continue full-time operation.

Also, additional funds need to be provided to the Corps of Engineers for continuation of the planning and engineering of the Oliver lock replacement. This lock was built before World War II and is substandard in design and dimension compared to the other five locks which were completed and opened to navigation between 1954 and 1975 and current design standards. This lock is already a serious bottleneck on the waterway and will reach its practical upper limit of tonnage, 25.5 million tons, by 1987. Congressionally authorized studies for modernizing the Warrior-Tombigbee are nearing completion. The replacement of the Oliver lock with a modern, standard-sized lock is the most important aspect of this study. We believe the study will show a replacement lock is economicallyfeasible and is vital to the increased utilization of the waterway.

I join with the Warrior-Tombigbee Development Association in support of these projects and confirm our continuing commitment to fulfill our part of these projects in the future. The State of Alabama has already expended millions of dollars in support of navigation on this system and will continue to provide the necessary non-Federal resources to maintain it as a viable part of the inland waterway system.

Again, I appreciate this opportunity and thank this subcommittee for its faithful support over the years.

STATE INVESTMENT

Mr. NICHOLS. Thank you Governor.

Senator, you have asked some questions today about the investments that would be forthcoming. I would like to sort of reassure you by telling you some of the things that have happened on the Warrior-Tombigbee Waterway. We need support for continued operation and maintenance, and for modernization of the one lock out of the six on the system, which is not a standard size lock.

I will not go into the numbers, because that is in the prepared statements we have submitted. But I would like to tell you, however, that when the modernization of the Warrior-Tombigbee was taking place between the mid-1950's and mid-1970's, the projection was that it would be 8 million tons of traffic by 1980. There were 8 million tons by 1966 and 17 million by 1980.

In just the last 5 years, there has been more money invested by the State of Alabama and private interests in water-related projects—about 10 times the amount of money the Federal Government has invested in the last 5 or 6 years.

Now, $250 million by the Alabama State Docks is something you mentioned a little earlier. Over $1 billion by the coal interests, over $6 billion by U.S. Steel. Over $35 million by just two marine operations preparing new equipment.

We have a new grain-handling facility; they have just built a new river elevator, totally dependent on the waterway, and that represents a livelihood of a lot of farmers from Alabama and Mississippi as they ship their grain to Mobile.

In the interest of time, I will not go further into that, but there are numerous examples of how investment has been spawned in the State by the investment the Federal Government made in providing the facilities.

I would like to defer to Sheldon Morgan.

[The statement follows:]

STATEMENT OF OFFA S. NICHOLS, JR., PRESIDENT, WARRIOR-TOMBIGBEE DEVELOPMENT ASSOCIATION

SUMMARY OF THE REQUEST

The following is a summary of the funding items for the U.S. Army Corps of Engineers for FY84 which bear on the needs of the Warrior-Tombigbee Waterway, and which we ask the Committee to approve:

Black Warrior & Tombigbee Rivers	Operation & Maintenance (In Budget Request)	$9,814,000
	Additional Capability (Not In Budget Request)	2,000,000
	Survey Funds (Not In Budget Request)	(Undetermined)

Other needs allied to the Warrior-Tombigbee are:

Mobile Harbor	Operation & Maintenance (In Budget Request)	$3,893,000
	Additional Capability (Not In Budget Request)	3,000,000
	Survey Funds (In Budget Request)	700,000

There are two items not included in the Corps' Budget request which we wish to bring to your attention. First, there is no "Additional Capability" stated. Historically, the Committees have been informed of additional capability, which is important to ensuring the full efficiency of these projects. Again, historically, the funding associated with this additional capability has been in the $2-3 million range for each the Warrior-Tombigbee and Mobile Harbor. The second omission is for funds in the Survey category for the Warrior-Tombigbee. The feasibility study for the replacement of Oliver Lock is in the final stages and it is most likely that survey monies will be needed during FY84 to permit the orderly continuation and refinement of this study.

We fully endorse and seek the approval of these items. The Warrior-Tombigbee Development Association appreciate the consideration the Chairman and Members of this Subcommittee and its Staff have shown us over the years. We ask for your support once again.

We are submitting additional written statements of support representing a cross-section of business, industry and the public.

Thank you for your consideration.

I am Offa S. Nichols, Jr., President of the Warrior-Tombigbee Development Association. Our members represent a cross-section of agricultural and industrial activities in the Warrior-Tombigbee basin in Alabama, with additional members from eight other states. The Association was formed in 1951 to bring about the redevelopment of the Warrior-Tombigbee Waterway System. Construction of the original 17 locks and dams began in the late 1870's and was completed in 1915. The navigation system provided by these locks and dams gradually deteriorated and by the mid-1950's the annual tonnage had levelled off at 2.5 million tons due to the condition and limited capacity of the obsolete locks.

The Association's objectives have been not only the replacement of the outmoded locks and dams and improvements in the Mobile Bay area, but also the appropriation of sufficient O&M funds to support reliable navigation. Congress generally has appropriated the necessary funds to support these objectives. There are now only six locks in the 400-plus miles from the head of navigation to the Port of Mobile. During the studies which resulted in this redevelopment, it was projected that by 1980 the Waterway would carry some 8 million tons. These levels were reached in 1966, and by 1980 some 17 million tons moved -- twice the projection. Ongoing studies project tonnages in excess of 25 million tons during the 1980's.

The Warrior-Tombigbee Waterway now has a system of modern locks and dams with the exception of one lock, William Bacon Oliver. While prior to the late 1970's the waterway had operated in a generally efficient and reliable manner, we now have a new set of circumstances. These new circumstances reflect not only the impressive growth up to now and the ravages of time and the elements, but even more the immediate and increasing impact of the world-wide energy and food picture. Some estimates indicate that 10% of our nation's coal reserves are located in the Warrior Basin. Almost 80% of the coal traffic handled by the Port of Mobile arrives there by barge from the Warrior Basin, and over 4 million tons of coal move via this waterway to the electric generating plants in our area. Farmers from twenty-one (21) Alabama and Mississippi counties ship their grain to Mobile for export via the waterway. We have a number of large and experienced mining operations in the area, as well as others capable of substantial growth. The development of these coal reserves, the skills and experience of our people, and the growing world-wide demand have created new demands on the waterway. Several thousand farmers are dependent on the Waterway for efficient transportation of their products. In Alabama, as in the nation, their largest cash crop is soy beans.

There are many other commodities moving on the Waterway, such as ores, crude and fuel oils, steel products, chemicals, aggregates and wood products. Related industries, though now impacted by the world-wide recession, plan to grow and modernize. These ever-increasing demands require that the Warrior-Tombigbee operate at peak efficiency on a full-time basis. Our operational efficiency is seriously impaired by a bottleneck caused by this one remaining substandard lock -- Oliver on the Warrior River. This pre-World War II lock is smaller than the other five, all of which are the new standard size of 110 x 600 feet. This necessitates tows being broken apart and utilizing double lockages to get through.

Meanwhile, millions of dollars have been invested by industry, farmers and other governmental agencies, providing thousands of jobs. The Alabama State Docks' $250 million expansion program is on schedule, and in 1983 will offer the most advanced coal handling technology available in this country. Similar expansion is underway for grain handling and bulk materials. The Waterway is essential to successful competition with foreign sources, particularly in the coal and grain markets.

Shipments of ore, steel and related products are expected to more than triple by 1985 because of a major, new manufactoring facility under construction by U.S. Steel. The efficiency and reliability of the Warrior-Tombigbee Waterway are a significant factor in the location of this new plant. Further, the continued efficiency and modernization of the waterway will be important in U.S. Steel's pending decisions on the reactivation of now idle facilities as the new facility begins to operate. Thousands of jobs hang in the balance, critical to an area with unemployment above 16%.

Availability of the Waterway is essential to the future expansion plans of other industry, looking beyond the current depressed state of the economy. The public utilities, co-ops, as well as investor owned, rely on the Waterway for over 20% of their fuel movements, and they will soon be moving thousands of tons of limestone to satify EPA required sulfur removal requirements.

These are but examples of how this Waterway is so central to the economy of this entire area, impacting both domestic and international markets. Attached with this statement are letters from a cross-section of industry further highlighting this importance.

With respect to the actual funding needs, we support the Corps' request for O&M funds in the amount of $9,814,000 for the Warrior-Tombigbee. We are concerned, however, that the Corps has not been permitted to state on "Additional Capability," as has been the recent practice. Recognition of funding for Additional Capability has proven to be important, even critical, in those years wherein rainfall was significantly greater or less than ideal. Our estimate is that an Additional Capability amount of some $2,000,000 should be recognized for contingency consideration by the Committee. For the Port of Mobile, without the Additional Capability, the funds are not adequate for even a normal year.

We also note and express grave concern over the absence of a requested amount or an Additional Capability statement in the Survey funds category for the Warrior-Tombigbee. We recognize that the study to determine the economic feasibility of the replacement of Oliver Lock and the correction of problems and removal of constraints in the existing channel resulting from the weather extremes of flooding and draughts over the years is nearing completion. However, we believe that some FY84 Survey funding is essential to permit the continuation and refinement of this study without costly interruption and loss of time. We request the Committee's consideration on this point and stand ready to work toward the determination of an appropriate level of funding, should this be appropriate.

The following is a summary of the funding items which bear on the needs of the Warrior-Tombigbee Waterway, and which we ask the Committee to approve:

Black Warrior & Tombigbee Rivers	Operation & Maintenance (In Budget Request)	$9,814,000
	Additional Capability (Not in Budget Request)	2,000,000
	Survey Funds (Not in Budget Request)	(Undetermined)

Other needs allied to the Warrior-Tombigbee are:

Mobile Harbor	Operation & Maintenance (In Budget Request)	$3,893,000
	Additional Capability (Not in Budget Request)	3,000,000
	Survey Funds (In Budget Request)	700,000

We fully endorse and seek the approval of these items. I, as President of the Warrior-Tombigbee Development Association, our other Officers, our Board of Directors, and our Members, appreciate the consideration of the Chairman and Members of this Subcommittee and its staff have shown us over the years. We ask for your support once again.

We are submitting additional written statements of support, representing a cross-section of business, industry and the public.

Thank you for your consideration. We stand ready to answer questions.

LIST OF WITNESSES

WARRIOR-TOMBIGBEE DEVELOPMENT ASSOCIATION

The Honorable George C. Wallace - Governor of Alabama

The Honorable Howell Heflin - Senator-Alabama
The Honorable Jeremiah Denton - Senator-Alabama

The Honorable Bill Dickinson - Member of Congress-Alabama
The Honorable Jack Edwards - Member of Congress-Alabama
The Honorable Ben Erdreich - Member of Congress-Alabama
The Honorable Ronnie Flippo - Member of Congress-Alabama
The Honorable Bill Nichols - Member of Congress-Alabama
The Honorable Richard Shelby - Member of Congress-Alabama

Mr. Sheldon L. Morgan - Chairman, Warrior-Tombigbee Development Assoc.
Mr. Tim Parker, Jr. - Vice Chairman, Warrior-Tombigbee Development Assoc.
Mr. Offa S. Nichols, Jr. - President, Warrior-Tombigbee Development Assoc.
Mr. N.J. Barchie, Jr. - Vice President, Warrior & Gulf Navigation Co., Chickasaw, AL
Mr. E.G. Browning - Director of Traffic, Alabama State Docks, Mobile, AL
Mr. Paul Delchamps - Lapeyrouse Grain Co., Mobile, AL
Mr. Jamie Ethridge - Director, Alabama Development Office, State of Alabama, Montgomery, AL.
Mr. Jerome Drummond - Vice President, Drummond Coal Sales, Jasper, AL
Mr. W. Barrett Nichols - Executive Vice President, Coal Systems, Inc., Birmingham, AL.
Mr. Marrion Rambeau - Director of Industrial Development, Chamber of Commerce, Mobile, AL
Mr. Steve Still - Government Affairs, SONAT, Inc., Washington, D.C.
Mr. Carl Torbert - President, Radcliff materials, Inc., Mobile, Alabama
Mr. Robert Worley - Federal Agency Affairs, Southern Company Services, Birmingham, AL.

LIST OF STATEMENTS

ADDSCO Industries, Inc.
Alabama By-Products Corporation
Alabama Power Company
Alabama State Docks Department
American Cast Iron & Pipe Company
Coal Systems, Inc.
Chicago Bridge & Iron Co.
Drummond Coal Company
Gulf Power Company
Federal Barge Lines, Inc.
First National Bank of Mobile
Lapeyrouse Grain Corporation
Merchants National Bank
Mississippi Power Company
Parker Towing, Inc.
Radcliff Materials, Inc.
South Central Bell Telephone Co.
Southern Company Services
Southtrust Corporation
Tom Soya Grain Co., Inc.
Tenn-Tom Towing, Inc.
Thompson Tractor Company
United States Steel Corp.
Vulcan Materials Company
Warrior & Gulf Navigation Company
Waterman Steamship Corporation

PREPARED STATEMENTS FROM MEMBERS OF CONGRESS

Senator COCHRAN. Before you proceed, Mr. Sheldon, I want to put Congressmen Edwards', Shelby's, and Dickinson's prepared statements in the record.

[The statements follow:]

STATEMENT OF REPRESENTATIVE JACK EDWARDS OF ALABAMA

Mr. Chairman, it is a privilege to come before you today to again lend my strong support for the Fiscal Year 1984 funding request for the projects included in the Black Warrior, Warrior, and Tombigbee River System.

The Black Warrior, Warrior, and Tombigbee Waterway is one of our more successful water projects and its growth in tonnage has been exceptional. In 1982, most of Alabama's export coal travelled the Black Warrior, Warrior, Tombigbee and over 4 million tons of coal arrived at electric generating plants via the waterway. Grain from 21 counties in Alabama and Mississippi was shipped to Mobile on the waterway. It also provided substantial movement for commodities such as ore, steel, forest products, petroleum, and chemicals.

The President has requested $9.814 million for operation and maintenance on the Black Warrior, Warrior, and Tombigbee System for fiscal year 1984 and that funding level should be adequate under normal rainfall and water level conditions. The O&M budget will be used in large part for routine dredging and snagging and for upkeep and repair of locks and dams. Except for the Oliver Lock and Dam, the system's locks and dams have been modernized, allowing traffic to expand significantly -- from 2.5 million tons in 1952 to about 17 million tons in 1979. Adequate maintenance is necessary to allow a smooth traffic flow for maximum efficiency of the system so that its full benefits will be achieved.

Unfortunately, the President's budget request does not include funding for the continued study of replacement of the William Bacon Oliver Lock and Dam. The Oliver Lock and Dam is obsolete. Its dimensions are simply too small to sufficiently accomodate the magnitude of traffic currently utilizing the system, much less the projected increase in traffic. Congestion at the Oliver Lock has affected the maximum use of other locks and has created serious delays in commodities shipments. The problem has also made it difficult to plan wisely for periods of maintenance along the system. Legislation, which I have cosponsored, is now pending to authorize replacement of the Oliver Lock and Dam and I am hopeful that the measure may be authorized and the money appropriated this year. In any case, the Corps' study of the problems at the Oliver Lock and Dam is vitally important to the overall effectiveness of the system and must continue. I urge the Committee to approve an appropriate level of funding for this purpose.

Thank you, Mr. Chairman, for permitting me to testify in support of the Black Warrior, Warrior, and Tombigbee River System and for your consideration of its needs.

STATEMENT OF REPRESENTATIVE WILLIAM L. DICKINSON OF ALABAMA

Mr. Chairman, members of the subcommittee, I appreciate very much the opportunity to appear before you again this year to discuss the Black Warrior-Tombigbee (BWT) River System and its budget for Fiscal Year 1984.

The BWT serves a multitude of users including manufacturers; iron ore and steel; finished products; coal and petroleum; agriculture; crude and fuel oils; chemicals; aggregates; wood products; small business; and private citizens. Thousands of farmers from 231 Alabama and Mississippi counties ship their grain over the system to Mobile for export to many parts of the world.

Twenty-eight years ago the system carried less than three million tons per year. In 1980, 18 million tons moved on the system, an almost seven fold increase during those years and a 10 percent increase over 1979. Even with the continued bottleneck on the antiquated Oliver Lock at Tuscaloosa the system will still reach its upper limit of 25.5 million tons by 1987, just four years from now. Oliver Lock was designed in the early 30's when the typical size of a barge was 25 x 140 feet, and towboats were not as powerful as they are today. During that period, traffic along this portion of the river hovered around 700,000 tons per year. That is much less than the 15 million tons of traffic developing during the late 1970's. The trend throughout the 70's has been increasing tonnage, which we expect to continue into the late 80's. Existing contracts support our expectations of further, rapid growth.

The other five locks were completed and opened to navigation between 1954 and 1975, and are of modern design and dimensions (110 ft. x 600 ft.) where Oliver is of the older design with dimensions of 95 ft. x 460 ft.

During 1982, some two-thirds of the coal exported through the Alabama State Docks arrived there by barge from the Warrior Basin, and over 4 million tons of coal moved by water to the electric generating plants in our area. Estimates of the coal reserves in the State of Alabama approach 41 billion tons, and over one-third of the annual output is shipped on the BWT. Farmers ship their grain to Mobile via the waterway; and there are many other important commodities such as ore, steel, forest products, petroleum, chemicals and aggregates. Efficient water transportation is critical to the pending U.S. Steel Pipe Mill. Its raw ore is to arrive via the BWT from the Port of Mobile. Much of the finished product will move the same way to the Gulf and by the intercoastal canal en route to the oil fields. Additionally, scrap from the Mill will move by water to other U.S. Steel facilities, such as Houston, where it is a primary raw material.

For every dollar the federal government has put into our waterways, millions of farmers, industrialists, state and local governments and private citizens and concerns have invested much more.

For this reason we request your support for the $9.8 million the Corps of Engineers has requested for Operations and Maintenance for FY 1984 as will additional funds needed to continue the planning and engineering of the Oliver Lock replacement.

The Warrior-Tombigbee is an irreplacable necessity for the millions of people who use and are served by it. They are all very appreciative of the care and concern you have expressed in maintaining this vital transportation system which is responsible for creating and maintaining many thousands of jobs. Though it does not run through my District I wholeheartedly support it because of its immense value to our nation and region.

Thank you.

STATEMENT OF REPRESENTATIVE RICHARD C. SHELBY OF ALABAMA

Mr. Chairman, I appreciate the opportunity to appear today in behalf of a project that is particularly close to me, the Warrior-Tombigbee Waterway System.

This particular river system travels right through the center of the 7th Congressional district as it makes its way from Birminghamport to Mobile on the Gulf of Mexico. Obviously, this thoroughfare is of vital economic value to West Alabama and certainly holds the key to its economic future as an attractive spot for industrial locations.

Several thousand farmers from twenty-one Alabama and Mississippi counties ship their grain to Mobile for export via the waterway.

There are many other important commodities moving on the Warrior-Tombigbee Waterway, as well as the large amounts of coal, steel, and farm products. Various ores, crude and fuel oils, chemicals, aggregates, and wood products comprise the other major elements.

The operations and maintenance request by the Corps of Engineers is $9.8 million. It is estimated that this should be an adequate amount for a year of average rainfall and generally normal water levels. Inasmuch as the Corps is not authorized to seek funds for additional capability, it could be necessary to seek further appropriations later in the year should there be severe flooding or drought.

The Warrior-Tombigbee Waterway now has a system of modern locks and dams with the exception of one lock, the William Bacon Oliver. The ever increasing demands for efficient transportations of Alabama's valuable resources require that the Warrior-Tombigbee operate at peak efficiency on a full time basis, and this is seriously hindered by this one remaining, pre-World War II lock.

The substandard lock is smaller than the other five, all of which are the newer size of 110 by 600 feet. Six barge tows, typically seen on the waterway, are able to "lock through" all locks except the Oliver in a single pass. However, at Oliver the chamber of 95 by 460 feet requires the six-barge tow to break apart and lock through in two passes. This takes, on the average, an additional 1½ hours, or nearly three times that of a single pass lockage.

Congressionally authorized studies by the U.S. Army Corps of Engineers to complete the modernization of the Warrior-Tombigbee Waterway are nearing completion. The most important aspect of these studies is the feasibility of replacing the Oliver Lock with a modern, standard-sized lock. Latest reports from the Corps reflect that the replacement is economically feasible under existing Congressional guidelines, and that the study report will be completed and submitted sometime soon. The provision of additional funds to permit continued planning and engineering efforts toward retirement of the Oliver study has also been requested by the Corps. Without those funds, the project could lie dormant for months.

Again, Mr. Chairman and members of the Committee, I appreciate the opportunity to appear before this distinguished committee on behalf of the Warrior-Tombigbee Waterway System, and I urge you to continue funding at the fullest possible extent of this vital state waterway project.

STATEMENT OF SHELDON L. MORGAN, CHAIRMAN, PORT AND WATERWAYS COMMITTEE, MOBILE AREA CHAMBER OF COMMERCE

Mr. MORGAN. Thank you, Mr. Chairman, I serve as a chairman of the Warrior-Tombigbee, and also of the port committee, there in Mobile, working with the Alabama State Docks; which is the public operations there.

The Director of the Alabama State Docks has asked I file a statement with you for the record, and I have the statement, which is already with the staff.

Senator COCHRAN. They will be made a part of the record.

[The statements follow:]

STATEMENT OF SHELDON L. MORGAN, MOBILE (ALA.) AREA CHAMBER OF COMMERCE

As chairman of the Port and Waterways Committee of the Mobile Area Chamber of Commerce, we submit a request for fiscal 1984 funding of harbor operations and maintenance in the Mobile Harbor. The Port of Mobile is continuing to grow, handling over 40 million tons annually, much of it comprised of heavy bulk cargo that impacts operation and maintenance of the harbor due to the necessity of maximizing drafts, consequently using all of the allowable channel dimensions. Furthermore, Mobile's port is at the terminus of a very extensive watershed in Mississippi, Alabama, and Georgia, thus creating a heavy maintenance problem, especially in years of high rainfall.

The U.S. Army Corps of Engineers this year has requested $3.9 million for operation and maintenance of Mobile Harbor and $700,000 to continue planning for deep-draft improvements. However, over the past 5 years, the average operation and maintenance outlays have far exceeded the funds requested in this year's budget. The Corps' capability for the operation and maintenance of this important harbor during fiscal year 1984 is $6.3 million. We respectfully request that the committee approve this level of funding for the harbor for upcoming appropriations. The $700,000 for planning will permit us to continue our planning for a deep-draft port. Certainly, this issue has been one of prime importance nationally in the past year or so, and Mobile has been prominently mentioned as being a most likely location on the gulf coast for the development of a deep-draft port to meet the Nation's coal export requirements.

STATEMENT OF ROBERT M. HOPE, DIRECTOR, ALABAMA STATE DOCKS DEPARTMENT

Good day gentlemen. On behalf of the Alabama State Docks Department and Port of Mobile we appreciate the opportunity to appear before the committee today and offer this statement in regard to fiscal 1984 appropriation measures relative to Mobile Harbor.

The Alabama State Docks Department is the terminal facilities operator for the Port of Mobile and operates and maintains port-handling facilities which include a bulk material handling plant, public grain elevator, export coal-handling terminal, general cargo facilities including wharves, piers, and warehouses, as well as a terminal railway.

The port complex entails approximately 1,445 acres and is valued in excess of $500 million.

Primary cargoes handled through the Port of Mobile include inbound ores such as bauxite, manganese, magnesite, ilmenite, iron ore, and steam coal. Grain exports include soybeans, corn, wheat, oats, middlings, and screenings. Coal for export constitutes a major cargo as well as outbound crude oil which moves to the port from recovery operations in Florida and in north Mobile County.

During the past 6 years the Alabama State Docks Department has expended in excess of $250 million on renovations, expansions, and improvements to the port-handling capabilities at the Mobile facilities. These funds have been expended to meet the required present cargo-handling capability of tonnage generated by our inplace inland river system, the four trunk line railroads serving Mobile, 45 truck lines which initiate and terminate cargo in Mobile, and in anticipation of the developing interstate waterway system which will become a realization with the completion of the Tennessee-Tombigbee Waterway.

It might interest this committee to know that the Port of Mobile has experienced an increase in tonnage over the last 6-year period, and overall port tonnages increased in 1982 by 11 percent over 1981, and in the specific case of export coal increases registered 31 percent over the 1981 figures. These increases in tonnage resulted in a year when most ports were feeling negative effects from down trends in both national and international economies. Overall tonnages through the Port of Mobile during 1982 were in excess of 42 million tons.

Our figures indicate, on an annual average over the last 5 years, the Corps of Engineers has expended approximately $4.8 million in operations and maintenance of the Mobile Harbor. It is our opinion that the Corps of Engineers' budgeted appropriation for fiscal year 1984 of only $39 million for operations and maintenance will be inadequate to maintain the Mobile Harbor at the desired functional levels.

At this time there is a need for maintenance dredging in both the channel and turning basin, and we have had several recent experiences with restricted vessel movements due to the need for maintenance dredging.

In view of the fact that both import and export tonnages are increasing annually at the Port of Mobile, that the export of both coal and grain from the Alabama State Docks facility is of such volume to directly affect favorably the country's balance of trade and payments, and that the value of goods moving through the Port of Mobile last year was estimated to be in excess of $2 billion, we would request that this committee obtain a capability figure from the Corps of Engineers for the Mobile Harbor and that the fiscal year 1984 appropriations be budgeted at that level.

We appreciate the opportunity to appear before this committee and voice our support in concert with that of Governor George C. Wallace for the adequate and full funding of the operations and maintenance of Mobile Harbor, as well as for the continued planning and engineering of the Mobile ship channel deepening and harbor improvement programs.

Thank you for the opportunity to appear before you today, and we respectfully request that this statement be incorporated in and made a part of these hearings.

WILLIAM BACON OLIVER LOCK AND DAM

Mr. MORGAN. I want to reiterate my support for those statements made by the Governor and state all the people with the statement here have very much an interest in the viability of the Warrior-Tombigbee. This waterway runs from Birmingham to Mobile.

This very important thing—before I leave this Warrior-Tombigbee, I want to reenforce one statement made about the future of that waterway. As one replacement lock and dam that we have to work out at Tuscaloosa, the Oliver lock and dam, that is an old dam there that does not have the same dimensions as the remainder of the dams own systems. When they were modernized in the 1950's and 1960's, we still have that lock and dam remaining that is a bottleneck at Tuscaloosa.

We talked with the House committee about this, Congressman Roe is looking at it, and if we ever get authorization and when it does come to the Senate, we hope it will have serious consideration on waterway projects in the near future.

MOBILE HARBOR OPERATION AND MAINTENANCE

It is very important now for this, and the only other item I want to speak to is the Port of Mobile.

The request to maintain Mobile Harbor this year by the Corps of Engineers was $3.9 million for operation and maintenance and $700,000 for planning. That $3.9 million is far short of what they have needed in the past. In fact, it is about 50 percent what they have spent on the average past 5 years.

Actually, the Corps is in a difficult position to maintain Mobile Harbor unless they get about $6.3 million. This comes from the historical records we have, and no one knows what it will take to keep that port up. We have had dredging delayed because of problems, and the last time we dredged that harbor, we were only able to dredge one half of the channel to get the deep part back to 40 feet; the other half was left over until they could work out some type of permanent disposal in the area.

We asked the House committee this morning that this operations and maintenance item be increased to $6.3 million for that. I think we will have serious problems in Mobile Harbor if we do not get this level of funding for operation and maintenance.

The operation and maintenance in Mobile Harbor is different from other harbors, because it handles over 40 million tons a year, most of which is bulk material, moving in vessels that pull things as deep as they could get that vessel in the channel. We have a 40-foot channel and they sail it at 39.6 feet. That is realizing the full capabilities of that channel. So it is very important, if that harbor is to operate effectively, that the maintenance of that harbor be kept up. In this respect, those dollars invested thus far by the Federal Government and the State governments can return the investments.

Thank you very much for the opportunity to appear before your committee again this year, and we appreciate very much what you have all done for us in the past.

Senator COCHRAN. Thank you Mr. Morgan.

Mr. NICHOLS. Mr. Jerome Drummond.

STATEMENT OF JEROME DRUMMOND, VICE PRESIDENT, DRUMMOND COAL SALES

COAL EXPORTS

Mr. DRUMMOND. I will not take up a lot of time. We are involved in the coal industry, and I can speak for it and the State of Alabama.

Some of the figures that were not in my statement that I introduced in 1981 were, we had the largest amount of coal exported from the United States of some 110 million tons, over 25 percent of that originated on the Warrior-Tombigbee system for export.

This year we will probably have over 50 percent of the export tonnages out of the United States in the coal industry. That proves to me that ours is a very stable economy, being competitive overseas, and our waterway systems is also competitive, which enables us to sell our goods. So, the situation of not having enough money to operate the locks and dams will have an adverse impact on our future growth. I think Mr. Nichols mentioned that there will be some 8 million tons of cargos moving on the Warrior-Tombigbee by 1980. Our corporation moves almost 7.5 million tons of coal ourselves during this period.

So, we are talking about the coal industry in Alabama probably being in excess of $0.75 billion of shipments per year. This helps our Nation's balance of trade—we need to keep the coal and grain exports so our balance of payments deficit is reduced.

I appreciate this opportunity, and we would like for you to give complete consideration to our statements. It is vital to our work force and economy in Alabama. Our State has one of the highest unemployment rates in the United States. And the coal industry, the life blood of our region, is dependent upon this waterway system.

Thank you very much, Senator.

Senator COCHRAN. Thank you, we appreciate your statement.

[The statement follows:]

STATEMENT OF JEROME DRUMMOND, DRUMMOND COAL CO.

The following is a statement in support of improving the efficiency and reliability of the Warrior-Tombigbee Waterway and the Port of Mobile.

Drummond Coal Company was founded in 1935 by Mr. Heman Drummond who developed his first mine underground near Sipsey, Alabama. It was a drift mine, angling into a hillside from which men dug and mules hauled the bituminous Appalachian coal. Many of Mr. Drummond's customers were local people who needed coal for home heat. As his sons grew up, they joined him, and the family opened their first surface mine using small diesel shovels. Almost half a century has passed since Mr. Drummond produced his first ton of coal.

Today, Alabama is a major coal producing and exporting state. Drummond Coal Company is the largest surface coal producer, the largest coal exporter in the southeastern United States, and one of the top twenty noncaptive bituminous coal producers in the nation. Drummond serves metallurgical, utility, and specialty coal customers on four continents from mines in six counties in north central Alabama. Today the company is a subsidiary of Drummond Company, as is Alabama By-Products Corporation, the nation's largest foundry coke producer.

Drummond Coal Company and its construction arm, Mine Services, Inc., alone presently employs in excess of 2,000 people with an annual payroll of approximately $56,000,000. Alabama By-Products employs another 3,500 people with an annual payroll of approximately $105,000,000.

About 85% of the state's coal production, including most of Drummond's, comes from the Warrior Field located in north central Alabama. The Warrior Field, or Warrior Basin as it is also known, is a basin-like geological structure covering more than 3500 square miles and underlying parts of Winston, Marion, Fayette, Tuscaloosa, Cullman, Blount, Jefferson, and all of Walker County. The field is cut through by the Warrior River system which has led to the development of mines using water transport.

Alabama's system of riverways offers water transport to national and international destinations via the McDuffie Coal Terminal at the year-round Port of Mobile of Alabama's gulf coast. Barging in Alabama is a particularly good way to move coal because of the extent of Alabama's waterways and because of the coal handling facilities available.

Drummond ships this coal from five different coal loading facilities located at various points on the Warrior River system, two of which are company owned and operated. Drummond owns and operates a barge loading facility located at Milepost 354 on the Warrior River in conjunction with its Kellerman mining operation. This barge loading facility handles about 2,000,000 tons of production at the Kellerman Mine, and 2,500,000 tons of production for the Jim Walter Corporation. Another company owned barge loading facility is located at Milepost 401.5 on the Locust Fork portion of Warrior River in conjunction with Drummond's Short Creek operation. This barge loading facility has the potential to handle approximately 1,500,000 tons a year. Drummond also contracts for the barge loading of approximately 1,000,000 tons a year at Port Birmingham which is located at Milepost 399 on the Warrior River.

Obviously, reliance upon Alabama's efficient system of waterways has been a very integral part of Drummond Coal Company's planning and operations to date. Availability of an economical and efficient mode of transportation is important to any industry in getting the product to market; however, because of the national and international markets for coal, efficient transportation modes are even more critically important to the coal industry.

This reliance by Drummond Coal Company on the Warrior-Tombigbee System and the Port of Mobile is seriously threatened by the 1984 fiscal year budget proposals for the Corps of Engineers. Reduced operation and maintenance for the Warrior-Tombigbee would be crippling for the coal industry in Alabama. By transporting its high quality coal product by an available and efficient waterway system, Drummond has been able to compete with other coal exporting nations in a successful manner and has contributed to reducing the current national trade deficit. Handicapping the Warrior-Tombigbee River System with reduced operation and maintenance will undoubtedly cause Drummond to lose this competitive edge. We feel that a loss of our competitive position could possibley lead to a reduction in the need for our product. Of course, this would only result in negative impacts on both our employment level and the economy of the region in general.

To date, significant delays are caused in the efficient movement of traffic on the Warrior-Tombigbee System by use of the samll, pre-World War II Oliver Lock located on the Warrior River. Because this lock is able to handle only a four barge tow, this necessitates having to break down the barge configuration prior to moving through this lock which, even with a six barge tow, amounts to doubling the lockage time necessary to move through this lock. This one lock alone creates a bottleneck in the orderly flow of traffic on the Warrior-Tombigbee System. Sufficient planning funds to continue uninterrupted progress toward the replacement of Oliver Lock with a reliable standard-sized lock are needed in the fiscal 1983 budget for the Corps of Engineers.

Drummond Coal Company is a member of the Warrior-Tombigbee Development Association. We strongly support the testimony given today by Mr. Offa S. Nichols. Jr., President of the Association, and heartily endorse the collective effort of the Association to improve the efficiency and reliability of the Warrior-Tombigbee Waterway. Although traffic on the waterway presently amounts to more than 18,000,000 tons a year, that figure represents only a small percentage of the river's ultimate capacity; given the needed improvements to the Oliver Lock and a continued committment to a federally constructed and maintained inland waterway system are granted. Certainly, the federal investment in the Warrior-Tombigbee River System has paid dividends many times over with the improved economic development in the area which the Warrior-Tombigbee River System serves.

Mr. BAXLEY. Could I add something Mr. Chairman?

Senator COCHRAN. Yes.

Mr. BAXLEY. That was Jerome Drummond of the largest coal company in Alabama, and I think it is important to point out to the committee for the record that his company is the largest single provider of coal to Japan, I believe; is that not correct?

Mr. DRUMMOND. We represent ourselves and Jim Walters.

Mr. BAXLEY. So I think it is about 25 percent of all the coal that Japan buys, they buy through them, so that does have a good effect on our balance-of-payment and trade deficits.

Senator COCHRAN. Very impressive.

IMPORTANCE OF WATER TRANSPORTATION

Mr. DRUMMOND. We have not always been that big. We were a family-owned corporation, we got into the export business from a family corporation. We were very—one of the main factors of our being able to compete, not only on the east coast, but also other countries in the world, is that transportation in the Warrior coal basin, the Locust and Mulberry Rivers, comes through our coal fields, so our facilities are located right on the waterway systems. We do not have as much flexibility on other modes of transportation as with the waterway system—it does make us competitive in the areas that would not be available or not have competitiveness if we did not have that waterway system.

Mr. NICHOLS. An interesting sidelight, Mr. Drummond was initially in surface mining, and they have now gone to deep mining, but Mr. Drummond mentioned they worked with another company. Jim Walter operates in the same area, four mines, one of which is the deepest mine in the world. So, we have quite a spread of coal activity in the State of Alabama.

We also do other things. I mentioned two marine firms that invested $36 million to finish the projects last year. Nearly 40 percent of that $36 million went into equipment not dedicated to hauling steel, coal, iron, so there are other commodities.

We thank you for permitting us to testify; we have submitted a list of all the supporting statements.

Senator COCHRAN. We will be happy to have that and will make it a part of the record. We will also include as many of those statements as possible in the record. We will take a careful look at this; we have a budget to be passed by Congress which restricts the amount of money we can appropriate for this kind of activity. With the restraints of the budget and the reality of needs to exist and the importance of this to our Nation's economy, we will try out best to come up with an appropriate level of funding.

I might say, on this Oliver lock near Tuscaloosa, you pointed out what we really need for that lock to be improved for funding is an authorization bill to be passed, which is a problem we have here on the Appropriations Committee. We are tied up because they will not come out with it. It has to be 10 years now since we have had an authorization.

Mr. NICHOLS. What we need from the authorization committee now is a small addition of planning money so the thing does not go into limbo while the study is in the final studies. The year 1983 should wind it up, but there will be a small amount of work in 1984. We are working on another piece of it.

Senator COCHRAN. Thank you very much.

[The statements follow:]

STATEMENT OF N. J. BARCHIE, JR., VICE PRESIDENT AND GENERAL MANAGER, WARRIOR & GULF NAVIGATION CO.

I am Nicholas J. Barchie, Jr., Vice President and General Manager of Warrior & Gulf Navigation Company. We are a member of the Warrior-Tombigbee Development Association and do support the testimony to be given by Mr. Offa Nichols as President of our Association; and, in the succeeding paragraphs wish to address the profound importance the Warrior-Tombigbee Waterway and the Port of Mobile represent to our company.

Warrior & Gulf Navigation joins in a collective effort to improve the efficiency and reliability of the Warrior-Tombigbee Waterway due to lower costs, conservation of energy, and the overall importance it has on domestic and international trade; e.g. lower transportation costs via water is very vital to the coal producers and farmers in Alabama to maintain competitive prices in today's world market in the movement of coal and grain.

WGN is a barge line located in Chickasaw, Alabama which operates 28 towboats and 315 barges making us one of the larger water carriers on the Warrior-Tombigbee Waterway. With the amount of equipment we operate our total annual capacity is around 10,000,000 tons. Additionally, we operate a coal handling and iron ore facility at Port Birmingham; and, at our Chickasaw Terminal 2 barge drydocks and 1 boat drydock with an employment totaling 275 people.

WGN provides barge transportation on the Warrior-Tombigbee Waterway for coal, iron ore, grain, iron and steel products (export and import), scrap, gypsum and various other bulk commodities. With the projected increases in coal consumption alone, over the next several years, we anticipate major increases to materialize in our coal shipments; thereby, making an efficient waterway more important than ever before to our company and the Port of Mobile in our efforts to accommodate this additional demand.

Our company began using the Warrior-Tombigbee Waterway in 1940. During 1982, our capital investment for new equipment was approximately $20,000,000 so that we could continue to provide economic water transportation to our customers on this waterway.

The major limitations we have encountered operationally are the Oliver Lock and shoaling on the Warrior-Tombigbee, e.g. the Oliver Lock was constructed prior to World War II making it outdated and obsolete to be efficient and reliable to accommodate today's size of tow consisting of 6 and/or 8 barges. With our larger tows, we are required to make a double locking at Oliver, whereby our delay time can run as high as 12 or 18 hours awaiting our turn to lock through during these periods of heavy demand. With the projected increases of tonnage on the Warrior-Tombigbee System in the foreseeable future this bottleneck and our delay time will only increase as this lock becomes further saturated.

In reference to shoaling, the severity is dependent upon the length of our high water season (traditionally running from late December through April of each year) and the amount of water involved, e.g. 60 feet plus vs. 45 feet of water during a given season causes our shoaling to be more severe come spring and summer. The degree of shoaling varies from season to season thereby making it extremely difficult to determine the amount of funds required for dredging, etc. to maintain a 9 foot channel. Moreover, we currently support the Corps of Engineers' budget request for O&M funds for the Black Warrior - Tombigbee and Mobile Harbor; however, we wish to respectfully request that consideration be given to approving additional funds to permit the refinement of the studies and the continuation of planning and engineering to compete the modernization of the Warrior-Tombigbee System by replacing the small, deteriorated Oliver Lock with a reliable standard size lock.

We wish to solicit your wholehearted support and assistance in this matter, as your subcommittee considers appropriation of funds for the operation and maintenance for the Warrior-Tombigbee System and Mobile Harbor.

STATEMENT OF WILLIAM J. ROY, PRESIDENT, ADDSCO INDUSTRIES, INC.

Ours is a major firm in a basic manufacturing industry in the Southwest Region of the State of Alabama. As builders and repairers of marine vessels, we are integrally involved and interested in the development and maintenance of first rate waterways. Specifically, we believe that we have both civic and commercial interests in the maintenance and improvement of the Warrior-Tombigbee Waterway as well as the Port of Mobile.

As one of the largest ad valorem tax payers and payroll providers in our area, we have contributed many of the funds which have been utilized in the improvement of the terminals and facilities of the Alabama State Docks both here at the Port of Mobile and up-river (including Demopolis and Tuscaloosa - Northport) to handle a variety of bulk cargos, including coal and grains. As a firm directly involved with the waterways of this region since 1916, we know from direct experience the multiple benefits of such navigation channels as the Warrior-Tombigbee. We believe that the variety of recreational and flood control aspects of these waterways compliments the tremendous positive economic impacts which they have on our locality, region, and nation. Probably the most recent direct national/international impact of the Warrior-Tombigbee Waterway has been the multinational export (to 21 nations) of coal, which has been shipped by barge down this waterway.

We also have a very substantial local economic interest in all of the waterways for which Mobile serves as the terminus. As a basic manufacturing industry, we generate secondary economic activities in primary iron and steel, transportation and warehousing, general wholesale and retail trade, electrical industrial equipment, general industrial machines, primary nonferrous metals, heating/plumbing/structural industrial products, engines and turbines, and lumber and wood products, as well as attract substantial non-local income to our area.

Our repair subsidiary directly benefits from the level of national and international trade reflected in vessels visiting the Port of Mobile for goods arriving via these waterways. All of our subsidiaries benefit from the generation of the depth of experienced skilled tradesmen which can only be developed and maintained in a thriving port.

We also anticipate a substantial direct increase in our level of operations resulting from the building, maintenance, and/or repair of barges and towboats which will be utilizing both this waterway and the Tennessee Tombigbee Waterway upon its completion. We look forward to an approval and funding of the 55 foot depth of the channel of the Port of Mobile and believe that it will have a direct and immediate impact on the economy of our region.

Of course a negative outcome concerning these opportunities could also occur. Were we denied the continued efficient operation of the waterways currently in place, including the Warrior-Tombigbee, we can clearly see a corresponding negative impact on the economy, progress, and quality of life in our area.

We hope that through the efforts of the many civically oriented members of the Warrior-Tombigbee Development Association and through our spokesman, Colonel Offa S. Nichols, Jr., the merits and benefits - including lower costs, energy efficiency, and importance to our common economic goals - will be demonstrated and merit your approval.

Thank you.

STATEMENT OF R. A. GUTHANS, PRESIDENT, TENN-TOM TOWING, INC.

As a member and director of the Warrior-Tombigbee Development Association, as well as a daily user of the Warrior-Tombigbee Waterway, we wholeheartedly support the testimony given by the President of the Warrior-Tombigbee Development Assn., Offa S. Nichols, Jr.

The importance of the waterway and its impact on, not only local, but national and international trade cannot be overemphasized. Historically, the Warrior-Tombigbee Waterway has been one of the most reliable navigation systems in the nation, but only through the continuing efforts of the Corps of Engineers' operation and maintenance program will it be able to maintain this status. Not only is it essential that the Corps' budget request for O&M funds for the BWT and Mobile Harbor be approved, but it is obviously necessary that additional funds be made available to permit the refinement of the studies and the continuation of planning and engineering. If the waterway is to continue as one of the most economical and energy efficient means of transportation, it, by necessity, has to be properly maintained and controlled through its locks and dams in order to assure its reliability. I am sure you are aware of the bottleneck on the BWT system caused by the antiquated and deteriorated Oliver Lock, the only substandard size lock still in use on the BWT system. Therefore, while we urgently need approval of the funds in the budget, we must also request additional planning funds to complete the modernization of the BWT system by replacing this pre-World War II structure with a standard size lock.

During the past twenty-five (25) years, I have been associated with companies utilizing the Warrior-Tombigbee Waterway to transport sand, gravel, shell and petroleum products. We presently utilize the entire length of the Warrior-Tombigbee Waterway hauling petroleum products from Mobile to the Port of Birmingham, Tuscaloosa and Demopolis and return products from Tuscaloosa and other terminals along the Warrior-Tombigbee Waterway to other ports, including the ports of Mobile, Alabama, New Orleans and Lake Charles, Louisiana and Houston and Port Arthur, Texas. During 1982 we moved approximately 3.8 million barrels (585,000 tons) of petroleum products on the BWT and anticipate moving more than 4.5 million barrels (700,000 tons) during 1983. In order to move these quantities we must be able to rely on the Warrior-Tombigbee Waterway System daily on a year round basis. Without the constant operations and maintenance performed by the U.S.Corps of Engineers, it would not be possible for the barge traffic industry to continue to grow and provide this country with the most economical and energy efficient mode of transportation available today.

The continued development and growth of the Port of Mobile depends vitally on the efficiency and reliability of the Warrior-Tombigbee Waterways, which in turn connects this system with all national and international ports.

The importance and necessity of maintaining this waterway cannot be overemphasized when we consider the impact of the opening in 1985 of the Tenn-Tom Waterway System connecting the BWT and Tennessee River, opening areas which offer unlimited opportunities and advantages for all of the United States.

We appreciate the opportunity of expressing our views on the Warrior-Tombigbee Waterway System and want to thank you for your cooperation in the past and continued interest for the future of all waterways in our nation.

STATEMENT OF ROBERT M. HOPE, DIRECTOR, ALABAMA STATE DOCKS DEPARTMENT

During 1982 the Alabama State Docks' Development Programs at the Port of Mobile began to wind down and completion of these programs in most phases of our operation will be completed in 1983.

Over the last six years the Alabama State Docks Department has expended approximately $250 million on renovation, refurbishing and new construction projects encompassing work at all four of the Department's operating facilities: The Bulk Material Handling Plant, the Public Grain Elevator, the Wharves and Warehouses Division, the McDuffie Export Coal Terminals, as well as the Terminal Railway.

Bulk Handling operations at the Port of Mobile and at the Alabama State Docks are vital to the State of Alabama as well as the MidAmerica Region of the United States, and together with our Inland Waterway System function as an expedient and cost effective means of shipping products produced and manufactured in the State of Alabama into worldwide markets.

Export grain tonnages arriving at Mobile are processed through the Alabama State Docks Department's Grain Elevator complex which has recently been expanded and is now undergoing a $15 million additional construction program involving a new ship berth and high-speed shiploading equipment which will effectively increase the annual through put capacity of this facility. Large volume shipments of grain move to the Department's Public Grain Elevator from inland elevators located on the Warrior-Tombigbee Waterway.

The Department will finish construction in May of this year on a $54 million addition to its McDuffie Export Coal Handling Terminal, the nation's most sophisticated export coal handling operation.

Almost 80 percent of the traffic moving into this coal handling facility originates in the Warrior-River Basin of the State of Alabama and is transported over the Warrior-Tombigbee Waterway to Mobile.

The Department's Bulk Material Handling Plant has recently completed new construction and renovation programs encompassing more than $30 million and acts as a vital link in the handling of both import and export ores produced and used throughout the State of Alabama.

The highly competitive posture of the Alabama State Docks and the Port of Mobile is a direct result of the Port's enviable inland transportation infrastructure. Four major rail lines serve the Port of Mobile; however, it is the State's Inland River System that continually gives the Port its competitive edge.

The expansion projects as outlined above are the direct result of bulk tonnages moving on Alabama's River Systems, and the Warrior-Tombigbee is, of course, the heavier utilized system in the State and constitutes a major transportation corridor for coal, iron ore, and grain.

The Alabama State Docks Department has developed four Inland Docks on the Warrior-Tombigbee System, two of which are equipped with grain elevators. The inland facility at Demopolis is a 362,000 bushel elevator while the facility at Tuscaloosa-Northport has a 572,000 bushel elevator and represents an investment of approximately $5 million.

The continued full time operation and maintenance of the Warrior-Tombigbee Waterway is vital to the interest of the Alabama State Docks and the Port of Mobile. The restraint on the Waterway at this time exists in the Oliver Lock and the continuance of an expedited study to replace this Lock is imperative.

The Alabama State Docks through this statement and in concert with the Warrior-Tombigbee Development Association and the Governor of the State of Alabama offers its support for the testimony of Offa S. Nichols, Jr., President of the Warrior-Tombigbee Development Association.

Not only is this Waterway vital to the interest of Alabama in that it provides an economic mode of transportation, it also has the national effect through the movement of export coal and grains of offering this country the assistance of bringing into balance our deficit in trade and payments.

The River System is energy efficient and plays a vital role in our local, national, and international trade, and we at the Alabama State Docks Department pledge our unerring support to its continued development.

STATEMENT OF MARSHALL W. CULPEPPER, COAL SYSTEMS, INC.

Coal Systems, Inc. wishes to express it's support for the Warrior-Tombigbee Waterway and the Port of Mobile because they are an integral part of the success of the coal industry and have contributed to the general wealth of the people of Alabama. In addition Coal Systems whole-heartedly supports the efforts of Mr. Offa S. Nichols, Jr., President of the Warrior-Tombigbee Development Association as he testifies on our behalf before your Committee.

Coal Systems, Inc. and it's subsidiary mining companies have grown over the last six years to become the second largest group of surface mining companies in the State of Alabama. Our ability to expand at such a rapid rate has been due primarily to the Warrior-Tombigbee Waterway which has given Coal Systems the ability to efficiently deliver coal to our customers in both the domestic and international markets.

Coal Systems knew from the beginning that the ability to load coal for transit on the Warrior-Tombigbee Waterway was a requisite for the Group's continued growth plan. Coal Systems now has three rapid loading facilities on the Warrior River, two of which operate a near full capacity. In 1982 alone, Coal Systems loaded one million tons on 60% of our total production for transportation on the Warrior-Tombigbee Waterway. Coal Systems, Inc. sales on the international markets have further increased our reliance on the Warrior-Tombigbee System and the Port of Mobile. In order for the U.S. to compete with other countries in the international coal market we must develop and maintain our waterways and ports to provide for the efficient movement of coal.

As Coal Systems, Inc. looks to the future, we see several problems which will hinder the growth and expansion of the coal industry in Alabama. Although we support the Corps of Engineers request for O & M Funds for the Warrior-Tombigbee Waterway and the Port of Mobile, we at Coal Systems, Inc. believe that additional funds should be made available to provide for planning and completing the modernization of the Warrior-Tombigbee System.

A major roadblock to the growth of this area is the Oliver Lock which was built in the forgone era of small wooden barges and steam boats. The Oliver Lock must be replaced with a more reliable, standard size lock built for the modern boats and barges on the rivers today. This project should be expedited since we have now virtually reached the tonnage capacity of the river.

Please listen to what Mr. Offa Nichols has to say when he testifies on March 23, 1983. Take note that he represents not only Coal Systems, Inc. and its 200 employees but thousands of other citizens who are looking and preparing for the future.

STATEMENT OF JAMES C. LUDWIG, VICE PRESIDENT, SOUTHERN COMPANY SERVICES, INC.

Southern Company Services, Inc., on behalf of Alabama Power Company, Gulf Power Company, and Mississippi Power Company supports the Warrior-Tombigbee Development Association and its President in their efforts before your committee. The Southern electric system is closely tied to the Warrior-Tombigbee Waterway, and through the Southern electric system the economy of our service area.

Alabama Power Company, Gulf Power Company, and Mississippi Power Company join with the Warrior-Tombigbee Development Association in an effort to improve the efficiency and reliability of the Warrior-Tombigbee Waterway because of the economies of water transportation and the importance of the Warrior-Tombigbee Waterway to local, national and international trade.

For the past twenty years these three utilities have used the Warrior-Tombigbee Waterway to transport coal to their respective electric generating plants at Demopolis, Alabama; Mobile, Alabama; Pensacola, Florida; Panama City, Florida; and Biloxi, Mississippi. In 1982 more than 3.5 million tons of coal was transported from points along the Warrior-Tombigbee Waterway for these three electric utilities. Gulf Power Company has also used the Port of Mobile to receive another 800,000 tons of coal per year since 1977. Because of the economic advantage of water transportation over other modes of transportation; the 1,329,514 customers of these three electric utilities will be directly affected by any expenditures for maintenance and upgrading of the Warrior-Tombigbee Waterway, which will improve the waterway's efficiency and reliability. Higher costs through inefficiency or unreliability of the Warrior-Tombigbee Waterway will have a direct and adverse effect upon our customers.

It is for these reasons that a program of constant maintenance and upgrading of the Warrior-Tombigbee Waterway channels and locks is not only necessary but imperative. We support the Corp's budget request for O&M for the Warrior-Tombigbee and Mobile Harbor and also request that additional funds be made available to permit the refinement of the studies and the continuation of planning and engineering.

STATEMENT OF C. T. ESTOCK, CHICAGO BRIDGE & IRON CO.

CBI for many years has encouraged efforts to improve the efficiency and reliability of the Warrior-Tombigbee Waterways because of the resulting lower freight rates for our products and efficiency in energy consumption.

In late 1974 we opened a multimillion-dollar fabricating facility on the Warrior River in Cordova, Alabama. There we can fabricate and load onto barges extremely large and heavy steel vessels for use in such industries as nuclear, petroleum, chemical processing, pulp and paper, and water and waste treatment. The market decline in the nuclear and oil refining industries compelled us to close the plant for several years. We are now operating it on a limited basis and hope that, as the economy improves, we will be using it more in the future.

We agree with the Corps of Engineers' budget request for operation and maintenance funds for the Warrior-Tombigbee and Mobile Harbor. We also feel that additional planning funds should be made available to replace the small, deteriorated Oliver Lock with a reliable, standard-size lock and to complete the modernization of the Warrior-Tombigbee System.

We support the testimony to be given by Mr. O. S. Nichols, Jr., President of the Warrior-Tombigbee Development Association, and solicit your support for the continued effort to improve the efficiency and reliability of the Warrior-Tombigbee Waterway.

STATEMENT OF MURRELL A. KEARNS, WATERMAN STEAMSHIP CORP.

My name is Murrell A. Kearns, and I am the Traffic Manager for Waterman Steamship Corporation in Mobile, Alabama.

Waterman presently has in its fleet of ocean going vessels 8 modern LASH type ships, each capable of handling 89 individual barges, each barge with a capacity of 370 gross tons. Permit me to explain, LASH is an abbreviation for Lighter Aboard Ship.

The modus operandi of our company is to tow the barges, both import and export, up any navigable stream where there is at least 9-feet of water. The barges are then loaded or discharged at some point on the river system and then towed back to connect with the "mother-ship" at anchor in a deep water port. The ships each measure 893 feet in length, the equivalent of 3 football gridirons.

Because we are a general cargo carrier, we accept all types of cargo that can be loaded into a LASH barge. This could be any type - bulk, bagged, machinery, vehicular, military, etc. The success of our entire operation depends largely on the ability to engage for hire the services of any towing service that can move our crafts swiftly and on schedule. We have in the past frequently used the port of Port Osborne near Birmingham and it is our fervent hope we shall have many more opportunities.

In the past we have suffered, and as a consequent, the shippers have been inconvenienced by delays, slow-downs, and complete closure of the Warrior-Tombigbee Waterway for scheduled maintenance and emergency repairs. We want to be a part of the public record supporting the Corp's request for O&M funds that would permit additional planning and engineering and for something badly needed, the modernization of the System by replacing the Oliver Lock, long recognized as a serious bottleneck in the system.

Sir, we respectfully request that you give every bit of support possible to ensure that sufficient funds are allocated to carry out the improvements and modernization of the Warrior-Tombigbee water system.

STATEMENT OF WALTER M. BOYCE, AMERICAN CAST IRON PIPE CO.

My company, American Cast Iron Pipe Company, Birmingham, Alabama exports extensively through the Port of Mobile. Our export business has expanded steadily over the last ten years and we have made good use of the Warrior-Tombigbee Waterway.

We employ approximately 3,000 people and our export business has contributed substantially to the health of our company and the employment of our people.

A dependable waterway is extremely important to us. It is necessary that we move barge loads of pipe on a close schedule to coordinate with the arrival of ocean vessels at Mobile.

We commenced barging pipe to Mobile about ten years ago. We have no hesitation in using water service and will use it whenever service is dependable and rates are competitive.

In a typical year we export approximately 40,000 tons of pipe through Mobile. We have used barges in the past and expect to use them in the future.

The Warrior-Tombigbee Waterway and the Port of Mobile are important to the economic health of our entire community. In addition to our pipe we find large volumes of iron and steel, ore and coal moving in water commerce. If this waterway is allowed to deteriorate it will have an adverse effect on our business, our employment and the general welfare of our entire area.

We urge you to act favorably on the Corps' budget request for O&M funds for the BWT and Mobile Harbor. We also ask that additional funds be made available to permit the refinement of the studies and the continuation of planning and engineering. It is essential that modernization of the Warrior-Tombigbee System be completed by replacing the inadequate Oliver Lock with a reliable standard size lock.

We finally ask that you consider carefully the testimony to be given by Mr. Offa S. Nichols, Jr., President of the Warrior-Tombigbee Development Association. He also speaks for us in this most important manner.

STATEMENT OF TIM PARKER, JR., EXECUTIVE VICE PRESIDENT, PARKER TOWING CO., INC.

My name is Tim Parker, Jr., and I am Executive Vice President of Parker Towing Company, Inc. I wholeheartedly endorse and support the testimony of Col. Offa Nichols, President of the Warrior-Tombigbee Development Association, and his request to you for adequate operational and maintenance funding for the Black Warrior-Tombigbee (BWTB) river system, funds for continued studies for the eventual replacement of Oliver Lock and adequate funding for the Port of Mobile.

Parker Towing Company operates a fleet of one hundred thirty-five (135) hopper barges, fifteen (15) towboats and four (4) tank barges. We have been providing barge transportation service to shippers on the BWTB for over forty (40) years.

The BWTB is a vital cog in the economic well being of Alabama. Most of the coal exported from Alabama, through the Port of Mobile, moves to Mobile via the river. Agricultural products, primarily soybeans, wheat and corn, also move in considerable volume via the BWTB to Mobile for export. On almost any given day, you will find a wide variety of items being shipped by barge to include not only coal and agricultural commodities, but also iron and steel articles, petroleum and chemical products, paper and forest products and cement, just to name a few. This diversification clearly indicates the broad economic impact that this waterway has on the health of business and commerce in Alabama.

As a member of Warrior-Tombigbee Development Association, I respectfully request that you continue to adequately fund the operational and maintenance requirements of this river as well as continued funding for engineering studies for the replacement of Oliver Lock. As I'm sure you know, Oliver Lock is one of the major bottlenecks in this country's transportation system and a replacement Lock is certainly a worthy federal investment. I would also urge continued adequate funding for the Port of Mobile. The Alabama State Docks is truly one of the outstanding port facilities in this country and plays a major role in the flow of export/import traffic moving to and from not only the southeastern United States, but a very broad cross section of this country.

STATEMENT OF AXEL BOLVIG, JR., ASSISTANT TO THE PRESIDENT, ALABAMA BY-PRODUCTS CORP.

We appreciate the opportunity to support the testimony before your committee of Col. O. S. Nichols, Jr., President of the Warrior-Tombigbee Development Association, urging favorable action on the Corps of Engineers budget request for operating and maintenance funds for the Black Warrior-Tombigbee River System and Mobile Harbor.

As our membership in The Warrior-Tombigbee Development Association indicates, the efficiency and reliability of the river system, together with facilities at Mobile Harbor, are important to our current trade and vital, we believe, to the full future development of our potential markets. Alabama By-Products Corporation is engaged in coal mining and by-product coke manufacturing in the greater Birmingham, Alabama population area which includes Jefferson and Walker Counties. We operate six underground coal mines, one surface mine and the largest merchant foundry coke plant in the United States. In today's depressed economy, our workforce exceeds 2500 employees and has been higher than 3000 in recent times. We hold approximately 100,000 acres of coal mineral rights. Large blocks of these reserves are as yet undeveloped, are accessible to the Warrior River, and represent considerable potential for our future growth in operations and employment. Our coal markets are both regional to electric utility and industrial customers and international through the Port of Mobile. Our coke business serves foundry and industrial markets nationwide and export markets in Latin America and occasionally in Europe.

In 1982, over 850,000 tons of coal mined by ABC moved by barge on the Warrior-Tombigbee Rivers. The total output of one large underground mine is currently shipped by barge to utility-owned electric generating plants. A significant part of our metallurgical coal production from two mines also moves on the river to export markets through Mobile.

As international demand for coal and coke products recovers, we foresee opportunities arising for increasing our export business. Our studies indicate that water movement to Mobile is an attractive, cost-saving alternative to rail shipment. However, we compete with products from other nations. The cost and dependability of transportation are make or break considerations for the international buyer when weighing one source against another, particularly in establishing long-term relationships. With continued planning and modernization, the Warrior-Tombigbee River system, coupled with harbor facilities at Mobile, is an attractive, if not essential, package in promoting new business for us as well as for other industry in our area. On the other hand, the consequences of neglecting the system are a no-growth climate and ultimate loss of market and jobs for an industry increasingly dependent on the river mode of shipment.

Specifically in regard to the river, a bottleneck to traffic exists at the antiquated Oliver Lock. It badly needs to be replaced with a reliable, standard-sized lock to complete the modernization of the river system. We feel that funds for planning and implementing this project should be given a high priority and fully support testimony directed toward this goal.

We are grateful for your understanding and support in previous years and again respectfully join in requesting approval of the Black Warrior-Tombigbee/Mobile Harbor funding for FY 84 as presented.

STATEMENT OF ALAN R. BARTON, PRESIDENT, MISSISSIPPI POWER CO.

I am writing you in support of testimony of Colonel Offa S. Nichols, Jr., President of the Warrior-Tombigbee Development Association on the Corps of Engineers budget request. In addition to the amount requested for operation and maintenance funds, additional funds are needed for continued planning and engineering.

Mississippi Power Company operates in southeast Mississippi, providing electric service to over 160,000 customers, including several large and critical defense and government installations. The bulk of our electricity is generated using coal as fuel.

Since 1976, a significant portion of our coal supply has been delivered by barge over the Warrior-Tombigbee Waterway. Today, approximately twenty-five percent of our coal deliveries are made over this route. In volume, this amounts to 540,000 tons a year.

In the past, we have had delays in deliveries because of lock maintenance and river shoaling. In order to serve our customers in the most economical and reliable manner, these interruptions must be kept to a minimum.

Our coal is purchased on the basis of competitive bids. If the Warrior-Tombigbee Waterway should become an unreliable route, coal mined by the region served by the Waterway would become unavilable to us and we would have to turn to higher cost suppliers. This would have a significant adverse impact on our customers, including the federal government, and on the economy of our service area.

Your favorable consideration of the testimony on behalf of Warrior-Tombigbee Development Association will be greatly appreciated.

STATEMENT OF CARL A. TORBERT, JR., PRESIDENT, RADCLIFF MATERIALS, INC.

The Warrior-Tombigbee Waterway along with the other waterways of the State of Alabama are invaluable links to a successful Port of Mobile and the economic growth in South Alabama. Offa S. Nichols, Jr., President of the Warrior-Tombigbee Development Association, will present testimony stressing the need for maintaining and enhancing the efficiency and reliability of the Warrior-Tombigbee System as well as the importance of low-cost, energy efficient water transportation to local, national and international trade. We fully support and endorse his testimony.

Radcliff Materials, Inc. is one of the leading producers of construction raw materials and aggregates on the Gulf Coast. We rely extensively on the waterways of Alabama, Florida, Louisiana, Mississippi and Texas for production and delivery of our products. In 1982 we transported via Alabama waterways in excess of one million tons of sand and gravel. We also transported 1,200,000 tons of limestone as well as significant quantities of other products. Our projections for 1983 are:

Sand and Gravel	1,300,000 tons
Limestone	1,500,000 tons
Other	750,000 tons

Radcliff Materials, Inc. operates a fleet of 26 boats, 105 barges and 9 dredges. We maintain a large terminal and handling facility on McDuffie

Island in Mobile, Alabama in addition to numerous support facilities throughout South Alabama and the Gulf Coast. In 1982 we completed a $16 million building program of new boats and barges for use in our marine operations.

The maintenance of authorized project dimensions is essential for the efficient, orderly production and delivery of materials throughout the waterway system. In order to provide this capability, it is imperative that the Army Corps of Engineers be provided with the appropriations necessary to continue the maintenance and development of the Warrior-Tombigbee Waterway System as requested in the fiscal year 1982 budget. It is also requested that additional funds be provided to insure that the Corps has the capability and flexibility necessary to maximize the utilization of the Waterway System and Mobile Harbor. Additionally, the provision for planning funds to replace the outmoded Oliver Lock should not be overlooked.

We sincerely appreciate the Committee's faith in the future of the great waterway systems of the State of Alabama and welcome its continued support of these vital projects.

STATEMENT OF THEODORE STEVENSON, GENERAL SUPERINTENDENT, UNITED STATES STEEL CORP.

I would like to take this opportunity to express support for the testimony to be presented to your committee by Mr. Offa S. Nichols, Jr., President of the Warrior Tombigbee Development Association. United States Steel Corporation in Alabama relies very heavily upon the Warrior Tombigbee River System to provide economic means of transportation for our raw materials and products. We feel that it is essential the Warrior Tombigbee System be maintained and operated in a manner to promote the continuing growth in this area.

Our corporation's decision to invest heavily in this geographic area was prompted in part by the fact that we have access to a system for water transportation. These investments will contribute to reducing unemployment in an area currently high in unemployment.

Current plans by United States Steel Corporation call for heavy use of Warrior Tombigbee System. Our current forecasts are as follows:

	Net Tons/Year			
Year	Ore	Coal	Fin. Products	Total
1983	-	950,000	-	950,000
1984	1,000,000	1,200,000	300,000	2,500,000
1985	1,200,000	1,300,000	450,000	2,950,000
1986	1,200,000	1,300,000	450,000	2,950,000
1987	1,200,000	1,300,000	450,000	2,950,000

We support the Corps of Engineers budget request for operations an maintenance funds for the Warrior Tombigbee River System as well as Mobile Harbor. We also feel additional funds should be made available to study system improvements and expansion.

STATEMENT OF JAMES A. JACKSON, THOMPSON TRACTOR CO., INC.

Since the impact of an efficient waterway system is of vital importance to the Alabama economy and the customers we serve, Thompson Tractor Company and its 450 employees have a vested interest in the improved efficiency and reliability of the Warrior-Tombigbee Waterway. Specifically, Thompson Tractor Company is the Caterpillar dealer for north Alabama, and we sell and service heavy equipment, material handling equipment, and diesel engines for trucks, boats and for both prime power and stand-by applications. Our products and people can be found at work virtually anywhere materials must be moved, from coal to grain to chemicals to manufactured goods.

One of our major markets is the coal industry. Alabama coal producers have been more active in international trade in recent years as foreign markets have been developed. Each year an increasing volume of coal is being loaded in the Warrior River basin and moved via the Warrior-Tombigbee to the state docks. In 1980, 84% of all coal exported through the port arrived by barge shipment; a total of 2493 barges of coal were processed. In addition Alabama Power annually ships by waterway in excess of 4 million tons of coal to be consumed within its system.

Other major Alabama industries served by Thompson Tractor also depend on a cost efficient system of water transportation. Products such as grain, metallic ores, pulp, paper and paper products and chemicals are commonly shipped via inland waterways to both domestic and foreign destinations.

As export markets for Alabama products continue to grow so does the importance of water transport. And increasing export business is important as it contributes to our international balance of trade and payments.

Obviously, the efficient operation and continuing improvement of our inland waterway system have far-reaching economic implications for the Alabama economy and particularly the industries we serve. We ask that you join with us in supporting both the Corps' operating and maintenance budget request and the need for additional funding to allow the refinement of feasibility studies and further planning and engineering, especially as is relates to the problem of the Oliver Lock.

In concern for the continued development of the Warrior-Tombigbee Waterway, Thompson Tractor Co., Inc. offers this statement in support of the scheduled March 23 testimony of Offa S. Nichols, President of the Warrior-Tombigbee Development Association. Realizing that our river system is energy efficient and plays a crucial role in local, national and international trade, we at Thompson Tractor Company pledge our ongoing support to its continued development.

STATEMENT OF PAUL E. DELCHAMPS, LAPEYROUSE GRAIN CORP.

Greetings! On behalf of Lapeyrouse Grain Corporation, I would like to state that our Company fully supports the Warrior-Tombigbee Development Association and the maintenance and completion of the Warrior-Tombigbee Project.

Lapeyrouse Grain Corporation is a commodities business dealing with the buying and selling of grain from farmers in the Southeastern States of Alabama, Mississippi, Georgia, Florida, and Kentucky. We ship most of the grain for export from each of our twenty-eight grain elevators by truck, rail, and barge to the Alabama State Docks Grain Elevator located at the Port of Mobile.

We currently operate four tugs and a fleet of barges for grain shipments along the inland waterway systems, and lease several hundred hopper-cars to facilitate our rail shipments. It is important to note that last year over fifty per-cent of our shipments of soybeans, corn, and wheat were made by cost effective barge transportation.

The Warrior-Tombigbee Waterway is a valuable and integral part of our transportation system and is vital to our future expansion and relied upon to substantiate the projections for increase in export trade.

I respectfully submit that the completion of the Warrior-Tombigbee Waterway will insure an economic recovery in an area hardest hit by unemployment and financial strife. With the extended waterway and additional grain elevators, the farmers in the surrounding agri-community can expect a 5¢/10¢ per bushel increase in price, competetive with those prices received by the mid-western farmers who have access to low cost barge transportation.

Lapeyrouse for the past fifteen years has been supportive in the efforts of the Corps of Engineers to maintain the navigation of our river systems, critical especially during severe draught and flooding periods. We, therefore, ask that you support the Corps' budget request for 9.8 million in O & M funds for the BWT and Mobile Harbor, and that additional funds be made available to permit the refinement of studies and further planning and engineering.

The United States over the past few years has lagged in its collective efforts to regain the prominance it once had as the leader in World Trade. Certainly, the Warrior-Tombigbee Project has to be ear-marked for a successful completion when weighed by the merits of the economic impetus for so many people and blessed by your continued support and fine leadership.

I offer my continued service and support to the Warrior-Tombigbee Project.

STATEMENT OF JAMES M. FARLEY, PRESIDENT, ALABAMA POWER CO.

Alabama Power Company's vital interest in the Warrior-Tombigbee Waterway spans nearly three decades and is expected to continue into the 21st century. Of the over 11,000,000 tons of coal received by Alabama Power Company in 1982, twenty-seven percent, or more than 3,000,000 tons, were transported via the Warrior-Tombigbee Waterway. Shipments in excess of this level are projected in the future.

Four of Alabama Power Company's seven fossil-fueled electric-generating plants are located on the Warrior-Tombigbee Waterway System. Coal from the Warrior coal field is delivered to Plant Gorgas in Walker County and loaded onto barges for shipments to two generating plants in the southern and central parts of Alabama. The 1,525-megawatt Plant Barry in Mobile County, which began operation in 1954, is supplied primarily by the Warrior-Tombigbee Waterway, as is the 500-megawatt Plant Greene County near Demopolis. Plant Miller in Jefferson also has barge capability.

Alabama Power has learned, through its extensive experience with the Warrior-Tombigbee Waterway, that thorough planning and maintenance are necessary to avoid expensive and unnecessary outages on the waterway. If adequate funds are not available to plan required improvements to the waterway and to maintain the waterway through dredging to full depth and width for its entire length and for replacement of the pre-World War II Oliver Lock, economical and reliable transportation of coal on the Warrior-Tombigbee Waterway could be replaced with less desirable transportation for movements of coal, possibly from other sources.

Any negative impacts on the Warrior-Tombigbee Waterway which increase delivered coal costs will adversely affect all of Alabama Power Company's over 1,000,000 customers. If increased transportion costs necessitate changes in coal sources, the mine workers employed by the Alabama coal mines, which supply the 3,000,000 tons moved by barge annually on the Warrior-Tombigbee Waterway to Alabama Power Company, will also be affected.

Alabama Power Company supports the collective effort of the Warrior-Tombigbee Development Association, of which it is a member, to ensure the reliability and efficiency of the Warrior-Tombigbee Waterway.

APALACHICOLA-CHATTAHOOCHEE-FLINT WATERWAY

STATEMENT OF R. H. McSWEAN, PRESIDENT, TRI RIVERS WATERWAY DEVELOPMENT ASSOCIATION

Senator COCHRAN. Our last witness will be Mr. R.H. McSwean. We welcome you to the subcommittee.

PREPARED STATEMENT OF CONGRESSMAN DICKINSON

Congressman Dickinson has submitted a statement in support of this project, which I will put in the record at this point.

[The statement follows:]

STATEMENT OF REPRESENTATIVE WILLIAM L. DICKINSON OF ALABAMA

The Apalachicola-Chattahoochee-Flint Waterway holds vast potential for the district I represent in southeast Alabama and for southwest Georgia and northwest Florida.

Figures developed recently by the Mobile District, Corps of Engineers, show that in 1980, 30,432 industrial and related service jobs in the tri-State area were related to waterway transportation. These jobs produced annual wages of $192,900,000. Area farmers also paid less for fertilizer and received slightly better prices for soybeans, wheat, and corn because of the availability of barge transportation.

These benefits came to our area even without the congressionally authorized 9-by-100-foot channel, which has never been completed through the Florida portion of the waterway.

If the channel is completed, the Corps study predicts that by 1990, as many as 70,983 jobs with earnings of $591,325,560 in the tri-State area will be related to waterway transportation.

I am pleased that the President included in his fiscal year 1984 budget $4,050,000 for operation and maintenance of the ACF Waterway and George Andrews lock and dam. I ask you to act favorably on that request.

In addition, the Corps expects soon to obtain a permit from the State of Florida to relocate rock outcroppings which have formed a bottleneck in the Apalachicola River since 1974. (Similar outcroppings in the Chattahoochee were removed in 1976, improving navigation significantly in the Alabama/Georgia portion of the waterway.) This subcommittee last year recommended the appropriation of $1,268,000 for the rock work. However, as you know, the Corps is now operating under a continuing resolution based on the fiscal year 1982 budget. Therefore, I request you to appropriate in the fiscal year 1984 budget $1,268,000 as a line item specifically for the rock relocation project.

I also endorse the President's recommendations for operation and maintenance of Jim Woodruff lock and dam and Lake Seminole and Walter F. George lock and dam for completion of concrete cutoff walls at Walter F. George Dam.

Especially at this time of high unemployment, investment in a resource such as the ACF Waterway, which stimulates private economic development in a region with untapped potential, seems one of the most appropriate possible uses of public funds.

Thank you.

Senator COCHRAN. My first recollection of Alabama was going down there one time when my brother was in Little League baseball competition and they had a big regional tournament in Groton, Ala. We got there in the family 1950 station wagon and stayed a few days; the team did real well. We won some games. So I have fond memories of Alabama.

Mr. BAXLEY. What year was that, sir.

Senator COCHRAN. I have forgotten. My brother was a pitcher for a team in the suburbs of Jackson, and he went on and played 6 years of professional baseball.

We welcome you. Please introduce those with you and proceed as you wish.

Mr. McSWEAN. Thank you for the opportunity to present to this subcommittee, once again the Corps of Engineering funding needs for the Apalachicola-Chattahoochee-Flint (ACF) Waterway as we see them.

I am R. H. McSwean, president of Tri-Rivers Waterway Development Association, a citizens' group representing southeast Alabama, southwest Georgia, and northwest Florida.

Last year you listened to us and recommended full funding in spite of attacks the waterway was then receiving. You gave us a chance to explain the extreme circumstances which had kept cargo tonnage from increasing and to prove that substantial economic harm, with loss of jobs and production, would result from closing the waterway to barge transportation. Thank you for your confidence.

For fiscal year 1984, we are pleased that the President has included in his budget $4,050,000 for the operation and maintenance of the ACF Waterway. We support that request and, in addition, ask you to appropriate $1,268,000 for badly needed rock relocation in the Apalachicola River and $250,000 to permit the Corps to resume basinwide planning. Our total request for operation and maintenance and planning amounts to $5,568,000.

I might add that even more compelling evidence of the importance of the ACF Waterway to the regional economy has come to light since we met with you last year. The Corps of Engineers has developed data indicating that the availability of the authorized 9-by-100-foot navigation channel would make a difference of more than 40,000 industrial- and service-related jobs in our area by the year 1990. That is a large impact for our largely underdeveloped, rural area.

Now the rest of my testimony will be entered into the record and I will take up no more time.

Senator COCHRAN. I appreciate your helping the committee in the way you have in providing us this information about the jobs you point to here as a part of your statement.

We do have a $4,050,000 request which has been submitted by the administration for operations and maintenance, and we will certainly take a look at the additional needs which you point out are very important to the continued operation, efficient operation of the waterway system.

I apologize to you too for having to wait so long to be heard today. We were hoping that we would be through by 3:15 and we hope you have not been inconvenienced by the delays caused today, and we appreciate your patience.

Mr. McSWEAN. Thank you, just so Eastern does not go on strike.

Senator COCHRAN. Come over to Jackson and fly Delta; you can come on American.

It is good to see you all here, Ms. Sumners.

Mr. McSWEAN. We appreciate that.

Mr. BAXLEY. I will be very brief, Mr. Chairman.

This means a lot to me personally, because that is my home, and I am reminded of a story of Senator Dirksen, that $5 million is not a substantial amount of money, but Senator Dirksen used to say $1 billion here and $1 billion there, and pretty soon you will be talking about real money. So, $5 million is a lot of money, but it is not really all that much when you look at the total picture and the possible economic benefits that would come to that area with $5 million. We think it is certainly a wise investment and we urge your consideration of the additional funds.

Thank you, Mr. Chairman.

Senator COCHRAN. Thank you, Governor.

Ms. Sumners, do you have any comments?

Ms. SUMNERS. Thank you, Senator. We just appreciate the help the Congress has given us through the years, and we do need this relocation project very badly, that is the thing that is holding us up the most right now.

Senator COCHRAN. Thank you very much.

Mr. HARDCOURT. We operate three ports—Columbus, Maymount, Ga., and we also have an inland port in Augusta, Ga.

In addition to that, our deep-water ports are Savannah and Brunswick. The Georgia Port Authority is an organization owned—it is a public organization owned by the State of Georgia, and we operate on the profit basis. The Georgia Port Authority has invested in excess of $4 million initial investment from an installation on the Chattahoochee and Flint at Columbus and Brunswick, and is a private oriented professional port authority. We have a great deal of confidence in the integrity of this water system and we feel that it is a system that owes an economic impact basis which is not only going to benefit the immediate area surrounding the system, but also the entire Southeast. Thank you.

Senator COCHRAN. Thank you, Mr. Hardcourt.

If there are no further comments or statement to be filed with the committee, then this will conclude the hearing agenda we had for this afternoon, and let me thank the Governor very much for the contribution you have made to our hearing today.

I think you have really put forth a great effort on these subjects before the committee, and I know the organizations from Alabama deeply appreciate the support that you have given today, and the committee is in your debt as well.

[The statement follows:]

STATEMENT OF R. H. McSWEAN, PRESIDENT, TRI-RIVERS WATERWAY DEVELOPMENT ASSOCIATION

Thank you, Mr. Chairman, for the opportunity to present to this subcommittee once again the Corps of Engineers funding needs for the Apalachicola-Chattahoochee-Flint (ACF) Waterway as we see them.

I am R. H. McSwean, president of Tri-Rivers Waterway Development Association, a citizens' group representing Southeast Alabama, Southwest Georgia and Northwest Florida.

Last year, you listened to us and recommended full funding in spite of attacks the waterway was then receiving. You gave us a chance to explain the extreme circumstances which had kept cargo tonnage from increasing and to prove that substantial economic harm, with loss of jobs and production, would result from closing the waterway to barge transportation. Thank you for your confidence.

For Fiscal Year 1984, we are pleased that the President has included in his budget $4,050,000 for the operation and maintenance of the ACF Waterway. We support that request and in addition, ask you to appropriate $1,268,000 for badly-needed rock relocation in the Apalachicola river and $250,000 to permit the Corps to resume basinwide planning. Our total request for operation and maintenance and planning amounts to $5,568,000.

Some of you have heard about the need for rock relocation several times before. In fact, you have twice recommended funding for the work. The first time, in 1975, Congress appropriated $956,000, which would have been sufficient to remove the rock from locations in both the Chattahoochee river in Georgia and Alabama and the Apalachicola in Florida. The Corps completed the work successfully in the Chattahoochee but ran into environmental opposition and permitting problems in Florida and could not proceed with the work in the Apalachicola. The rock hazards in Florida, since that time, have set the constraining depth of the navigation channel during low water, a problem that became particularly painful during a sustained drought in 1981.

When we came to you in 1982, the cost for removing the rocks from the navigation channel in the Apalachicola alone had increased to $1,268,000. By this time, the Corps and the Florida Department of Environmental Regulation had reached some agreements, which included replacing the rock within the stream to serve as fish habitat. I understand that this subcommittee recommended the appropriation, but no funds were included in the continuing resolution adopted for FY 1983.

That explains why we have returned this year asking you to appropriate $1,268,000 as a line item specifically for rock relocation in the Apalachicola river. This, we believe, is the single expenditure that will do the most to improve navigation on the system.

A longrange concern of this association is the need for broad, basinwide planning. The Corps has authority under House Document No. 308, 69th Congress, to carry out such planning and has used that authority in the past. The last "308 report" was issued in 1973. Later, the States of Alabama, Georgia and Florida attempted to secure Federal funding to do their own basinwide study, independent of the Corps. That effort now seems dead. We would like the Corps of Engineers to resume its 308 study.

The items for rock relocation and for reopening the 308 study are in addition to items recommended in the President's budget. We endorse the President's recommendations for the operation and maintenance of Jim Woodruff Lock and Dam, Lake Seminole and Walter F. George Lock and Dam and for completion of concrete cutoff walls at Walter F. George Dam.

I might add that even more compelling evidence of the importance of the ACF Waterway to the regional economy has come to light since we met with you last year. The Corps of Engineers has developed data indicating that the availability of the authorized 9 by 100 foot navigation channel would make a difference of more than 40,000 industrial and service related jobs in our area by the year 1990. That is a large impact for our largely under-developed, rural area.

We do not have to remind you that Congress authorized the channel in 1946 and it still has not been attained on a dependable basis. The economy of our region has suffered as a result. Existing industries, which have investments valued at more than $3.5 billion along the waterway, have failed to realize transportation benefits they had every right to expect. State and local port facilities have been underused. Potential new shippers have turned away from the ACF Waterway to other systems with dependable channels.

The expenditures we are requesting will not completely insure the authorized channel. They will, however, greatly increase the percentage of the time the channel is available and give the ACF Waterway a chance to stay in the competition for interstate and world trade.

Thank you.

SUBCOMMITTEE RECESS

Senator COCHRAN. If there are no further comments or statements to be made, the committee will stand in recess until 10 o'clock tomorrow morning.

Whereupon, at 3:45 p.m. Wednesday, March 23, the subcommittee was recessed to reconvene at 10 a.m. Thursday, March 24.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1984

THURSDAY, MARCH 24, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m. in room SD–192, Dirksen Senate Office Building, Hon. L. Bennett Johnston presiding.

Present: Senators Johnston, Burdick, and Sasser.

NONDEPARTMENTAL WITNESSES

HEARING PROCEDURE

Senator JOHNSTON. The meeting will come to order.

In the absence of Senator Hatfield, I have been asked to preside over today's session. Senator Hatfield expresses his regrets that he cannot be here. However, on behalf of the chairman, I want to welcome each of you to the hearing today. We have a large number of witnesses that wish to be heard. Therefore, in accordance with our notification to each of the witnesses, it will take some self-restraint to hold oral testimony to a minimum, in order that all of you who have requested an opportunity to testify may be heard.

So, in keeping with the subcommitee's wishes, I ask that the detailed prepared statements that each of you have worked out very carefully, be submitted for the record to be reviewed. That is the record that the subcommittee will study in determining its judgment and recommendations for the upcoming year. This way, you will have a carefully detailed record so anyone not present will be able to arrive at an independent judgement. Then, if each witness will summarize or highlight the important points in his oral testimony, it will be most helpful.

Again, welcome, and we will proceed with our first witness, Father Byron Collins, S.J., of Georgetown University.

NATIONAL EXEMPLAR PHOTOVOLTAIC PROJECT FOR HIGHER EDUCATION

STATEMENT OF FATHER T. BYRON COLLINS, S.J., GEORGETOWN UNIVERSITY.

Father COLLINS. It is a pleasure to be here. I want to thank you and all the members of the committee for the support you have given to the National Exemplar for Higher Education, photovoltaic project. It is on schedule and we expect the flat plate collectors to be installed in June

1984. We are pleased to report to you that by the joint effort of the committee, the Department of Energy, and Georgetown University, the project is successful. We have had five first-class participants, each spending between $250,000 to $500,000 of their own funds to make the bid. The flat plates have been tested; we have made the selection. I have in my testimony that is a combination of Hughes Aircraft and Solarex.

We would like to invite the committee to see it when we install it.

Thank you, Senator.

Senator JOHNSTON. When do you expect it to be finished?

Father COLLINS. In June 1984.

Senator JOHNSTON. This will be the largest solar exemplar in the world?

Father COLLINS. That is right.

Senator JOHNSTON. Thank you very much.

[The statement follows:]

STATEMENT OF REV. T. BYRON COLLINS, S.J., GEORGETOWN UNIVERSITY

Mr. Chairman and members of this committee, I am Rev. T. Byron Collins, S.J., special assistant to the President of Georgetown University.

This is a synoptic report on the photovoltaic higher education national exemplar program which has been sponsored by your committee.

The facility construction is complete with the roof planes providing 36,000 square feet of watertight surface for the mounting of the photovoltaic flat plate modules. Five corporations have provided test modules for the exemplar project: BMD Corp./Arco Solar, Hughes Aircraft/Solarex, Solarex Corp./Solarex, Stone and Webster/Westinghouse, and General Electric. These test modules underwent rigorous examination by the jet propulsion laboratory, the results of the test were reviewed by Oak Ridge D.O.E., Sandia National Laboratory, and Georgetown University with its consultants, Science Application, Inc. (SAI). The results indicated that the most feasible module would be provided by the combination of Hughes/Solarex proposal.

The university has thanked the other participants who individually had spent between $250,000 and $500,000 to participate in this selection program and have asked all of the firms to assist the national program and have their modules used at other universities. Because of the interest of this committee in this national PHENEF, the three firms are in the process of mass producing the photovoltaic flat plate roof shingles. This is what Georgetown University had stated it would try to get done. As you are aware, the mass production will greatly reduce the unit cost enabling other universities to purchase these from construction funds available to them without a Federal grant.

We expect the installation of the modules at the Georgetown University site by June 1984. We will invite all the members of this committee for the ceremony that occurs on this historic event.

Presently the funds provided by this committee for this project and the grant awarded to this PHENEF project are adequate to cover the bid of the successful company. We will keep the committee informed of our progress and request your continued interest.

Georgetown University expresses its prayerful gratitude for the wisdom and fortitude of this committee.

HIGH-TEMPERATURE, GAS-COOLED REACTOR PROGRAM

STATEMENT OF HAROLD AGNEW, PRESIDENT, GENERAL ATOMIC TECHNOLOGIES, INC.

Senator JOHNSTON. Next, our good friend Harold Agnew, who is president of General Atomic Technologies, accompanied by our former House colleague Clair Burgener.

Mr. AGNEW. I have not seen him.

Senator JOHNSTON. Harold, welcome to you, then.

Mr. AGNEW. Thank you, I am Harold Agnew, president of GA Technologies. I appreciate you allowing us to appear before you to express my views with regard to continuation of the development of the gas-cooled reactor and also to express my support for your continuing support for our magnetic fusion program.

BENEFITS OF HTGR

You appreciate our reactor systems which offer the capability to serve not only the role of electrical generation in a more efficient manner, but also to serve a second role, that of bringing high-temperature steam to meet the future needs of the process industries. The technical things will support the commercial development. Provisions include a substantial efficiency, 40 percent; and the highest safety margins of any commercial nuclear system. It also provides reduced level of radiation for operating personnel, lower levels of waste, reduced cooling, and increased siting flexibility.

PRIVATE-SECTOR SUPPORT

These benefits can also impact on the future acceptance of nuclear systems by the public. Private-sector participation has been a key element of the GA program. That is the Nation's only nuclear program to receive a majority of its development from the private sector.

The program has continued to enjoy the support of a large segment of our Nation's utility industry. This support is exemplified by Gas-Cooled Reactor Associates, represented here today by its chairman, Mr. Rich Walker, who is also president of Public Services Co., of Colorado, owner and operator of the HTGR.

For its part, GA Technologies, in addition to continuing investment in the technologies, has been moving forward in parallel with the program in utilities to insure having placed a strong and experienced industrial team with the capability to undertake the design and manufacture of GA nuclear system for commercial projects. The proposed Government role of this design is a key incentive to encouraging continuation of such private-sector participation. The program plans submitted by the participants to the DOE are based on the private sector accepting responsibility for 75 percent of the lead plant program costs representing the commercial value of the plan and related costs, with the Government providing the additional 25 percent through continued DOE research and development funds.

INTERNATIONAL PARTICIPATION

International cooperation has been a part of the reactor program in the United States. A formal agreement exists between United States and governments of Germany and Switzerland providing for a cooperative exchange program for the development of the HTGR. With Japan, a number of agreements are in place and the Japanese have indicated their desire to develop close relationships with U.S. programs on a government-to-government level.

The Congress of the United States has long supported continued development of the HTGR, and we at GA have been greatly appreciative of this critical support.

Continuation of Federal support of appropriate program activities is a critical element in maintaining utility and public enthusiasm and technical progress, so that this nuclear system will be available as a viable option when the nuclear role in meeting the demands is again recognized and rigorously pursued.

BUDGET REQUIREMENTS

HTGR may be the only advanced system ready and acceptable to the public for commercial deployment. The fiscal 1984 budget requirement set forth in the program plan submitted to DOE in advanced systems is $36 million, including $2 million for capital equipment, and $3 million for the spent fuel treatment program. This level of activity is fully consistent with the most effective use of program sources and the initial operation of the lead plant by 1997.

In recognition of the constraints placed on the Federal budget, we, in conjunction with other program participants, have also developed a support level which, although not meeting all the goals, would provide for maintenance of critical capability. That minimum budget would provide a total of $40 million for the HTGR program, advanced systems, and spent fuel, including $2 million for capital equipment. This is approximately the same level of funding appropriated by the Congress in fiscal years 1982 and 1983. To facilitate safety research under the direction of the Nuclear Regulatory Commission with the Department of Energy program plans submitted for fiscal 1984, we would urge your support for a level of $4.5 million, consistent with the fiscal 1984 NRC funds to accelerate HTGR at the Nuclear Regulatory Commission.

MAGNETIC FUSION PROGRAM

I would now like to turn to the magnetic fusion program.

A reinforced commitment to magnetic fusion is warranted by vast promises by the accelerating pace of scientific advancement; I feel the work in my program is poised for a major go-ahead.

Fiscal 1984 keeps it on track with the vital energy on acceptable time schedule. The past year has been an especially productive one there. Preeminent scientific development was a demonstration of record values of plasma beta accomplished on GA's Doublet III machine. The values obtained are necessary to increase desirability density in reactors. Thus, the achievement has been received with great enthusiasm with the fusion researchers throughout the world. Engineering has kept pace with advances. The most important engineering milestone was the startup of the Tokamak at Princeton. This accomplishment is evidence of how the program has progressed toward readiness. However, the access of new initiatives jeopardizes us. While commitment to a first generation reactor is not possible, the program should take steps necessary to prepare for this eventuality.

PROGRAM RECOMMENDATIONS

I recommend two steps that require modest increments for you. These are, first, development of conceptual design of a Tokamak Fusion Core Demonstration device, proposed by the advisory committee, which would add $6 million in fiscal 1984. Second, establishment of a national ion cyclotron heating engineering program to produce plasma heating hardware needed on Doublet III, an additional $10 million in fiscal 1984.

These two initiatives, once in place, will provide the program elements for a future commitment, the strengthening is also important in the United States.

Mr. Chairman, again, I would like to express our appreciation for your continued personal support and that of your committee colleagues and trust your review of our programs, including testimony of the other program participants before you today, will provide the basis for the continued authorization of these programs. I would just ask your permission to submit for the record, along with my formal statement, a copy of a document entitled "HTGR Program, 1983," which will supplement the technical information provided in this statement for you of the HTGR.

Senator JOHNSTON. It will be included in the record.

Thank you very much Mr. Agnew.

[The statement and information follow:]

STATEMENT OF HAROLD M. AGNEW, PRESIDENT, GENERAL ATOMIC TECHNOLOGIES, INC.

Budget Action Recommended FY'84

Department of Energy

High Temperature Gas Cooled Reactor (includes $2M for capital equipment)	$ 40M
HTGR Spent Fuel Treatment Program	$ 3M
Magnetic Fusion Program (President's request of $467M plus $6M for Tokamak Fusion Core Demonstration and $10M Ion Cyclotron Heating Engineering Program)	$483M

Nuclear Regulatory Commission

HTGR Safety Research Program	$ 4.5M

Mr. Chairman and Members of the Subcommittee, I am Harold M. Agnew, President of GA Technologies Inc. I appreciate your permitting me to present the views of my company in support of a continuation of development of the High Temperature Gas-Cooled Reactor (HTGR) and continued support for the magnetic fusion program. The HTGR is well known to you and many of your Members and staff. However, allow me to quickly define its major features for those new Members who may be reviewing the FY'84 Department of Energy budget without the benefit of previous program briefings.

The historic role of nuclear power has been in electrical generation. The HTGR offers a unique capability to not only serve this role in a more efficient manner but also to serve a second role, that of providing high temperature steam and heat to meet the future needs of the process industries for low cost, clean energy. We see the long range contribution to be made by nuclear in this energy sector to be as significent as its contribution in electric generation. The HTGR is the only nuclear reactor which has this potential.

As would be anticipated with an advanced, second generation reactor the technical features of the HTGR have been selected to offer benefits to the user which support its commercial development and deployment. These benefits include a substantial increase in thermal efficiency; the highest safety margins of any commercial nuclear system; reduced levels of radiation exposures for operating personnel; lower levels of gaseous, liquid and solid waste discharge; reduced cooling water requirements; and increased siting flexibility. These benefits are not only of interest to the ultimate user but we believe can also impact upon the future acceptance of nuclear systems by the public.

The basic characteristics of the HTGR have been demonstrated by the operation of the 40 MW (e) Peach Bottom I nuclear plant during the years 1967 through 1974, and the 330 MW (e) Fort St. Vrain nuclear station, which successfully reached 100% of design power in 1981 and is continuing to verify key design features which would be incorporated in commercial scale HTGRs. The current stage of development provides the basis for the next step in the evolution of a commercial system, the construction and operation of an HTGR Lead Plant, the prime objective of which is to demonstrate a full scale commercial technology. Gas-Cooled Reactor Associates, the utility/user organization supporting the HTGR, testifying here today, will review the current Lead Plant Project activities.

Mr. Chairman, I would ask your permission to submit for the record, along with my formal statement, a copy of a document entitled "HTGR Program, March 1983" which will supplement the information provided in this statement and further define the technical and operational features of the HTGR.

As you are aware, since the initial HTGR project at Peach Bottom, which was undertaken in conjunction with 52 electric utilities, this program has continued to enjoy the support of a large segment of our nation's electric utility industry.

This support is exemplified by Gas-Cooled Reactor Associates, which is represented here today by its Chairman, Richard Walker, who is also President of Public Service Company of Colorado. The support of the utilities results from the advanced features of the HTGR, all of which combine to provide the promise of a competitive system with enhanced environmental benefits, substantially reduced consequences to the public, the work force, and the reactor facility itself while in standard operation or during any potential accident. Through FY'83, the utilities along with GA Technologies have invested well over $1 billion to develop this technology -- our Nation's only nuclear program which has received the majority of its development funding from the private sector.

Although the base of utility support is for base load electricity production, the utilities view the application of the HTGR to industrial processes as a major opportunity to improve the future energy balance and energy economics in the United States and as an area for potential broadening of the utility role thru jointly sponsored cogeneration projects. The HTGR has the unique capability to serve a large segment of the industrial energy needs providing process steam at temperatures initially up to 1000°F. Cogeneration application studies have shown that HTGR steam electric/cogeneration systems integrate easily with major processes including those in the chemical, petroleum, shale oil, tar sands, and metal refinery industries, and that the economics are favorable when compared with the other alternatives. In the future as advanced higher temperature versions of the HTGR become available, even broader applications will become practical. The HTGR is the only nuclear technology with these unique capabilities.

Private sector participation has been a key element of the HTGR program. However, the proposed government role in support of development of appropriate technology and first-of-a-kind design remains a key incentive to encourage such private sector participation. The program plan submitted to the DOE is based on the private sector accepting responsibility for 75% of the lead plant program costs representing the commercial value of the plant and related costs, with the government providing the additional 25% through continued DOE research and development funds. For its part, GA Technologies was the pioneer in the development of HTGR technology, is currently recognized as the world leader in this field and continues to believe strongly in the concept and the contribution that it can make to meeting the world's need for clean, safe, low-cost energy. In addition to continuing investments in the technology GA has been moving forward in parallel with the DOE program and utility activities to ensure having in place a strong and experienced industrial team with the capability to undertake the design, manufacture of the HTGR nuclear system for a Lead Project and for commercial follow-on projects. Thus, the private sector utility/industry investment remains paramount in the commercial development of the HTGR.

International cooperation has long been a part of the High Temperature Gas-Cooled Reactor program in the United States. A formal agreement exists between the U.S. and the governments of Germany and Switzerland providing for a cooperative exchange program for the development of the HTGR. The benefits from such exchanges are enhanced by numerous exchange agreements existing between industrial participants in the U.S. and European programs. With Japan a number of industry level exchange agreements are in place and the Japanese have indicated their desire to develop closer relationships with the U.S. program on a government to government level. Those of us in the industrial sectors in the two countries are urging ways to formalize such expanded cooperation. The common technology requirements and many common objectives of the major German, Japanese, and the U.S. programs, provide a unique opportunity for instituting effective, cost beneficial joint development activities for the HTGR. We understand that the Soviet Union is also pursuing this technology.

The Congress of the United States, in a bipartisan effort, has long supported continued development of the HTGR and we at GA have been greatly appreciative of this critical support. Although the HTGR has without exception been recommended for continued Department of Energy funding year after year in budget submissions to the Office of Management and Budget, that office has in recent years refused to support the DOE budget request. Consequently in the FY'84 DOE budget submittal to the Congress, the HTGR is absent. As you know, the utility industry has suffered from both financial and regulatory difficulties which has impacted their current ability and need to build new capacity. We are confident, however, that when these difficulties have diminished, and when the HTGR has progressed to the point where it can be considered for commercial deployment, it will be the system of choice by reason of advanced performance, investment protection and the improved prospect for public acceptance. A continuation of federal support of appropriate HTGR program activities is a critical element in maintaining utility, international, and public enthusiasm and technical progress so that this nuclear system will be available as a viable option when the nuclear role in meeting the Nation's energy demands is again recognized and vigorously pursued.

Key program goals, which I defined to you in my testimony of last year have, we are proud to say, been met with the FY'82 funds appropriated and signed into law in October of 1981. Multiple lead project candidates have been identified, in cooperation with GCRA and the DOE, a lead project strategy plan has been established, the conceptual design of the HTGR steam cycle/cogeneration reactor reached 60% completion, and the vendor/supplier team including GA, Combustion Engineering for heat exchanger support, and General Electric Company for circulator support continues. Technology development, critical to any future HTGR program, achieved major accomplishments. Construction of the developmental coater for LEU fuel particles was completed, prototypical processing units for fuel kernel manufacturing progressed, testing was performed of core models and incorporated design changes to verify the elimination of core fluctuations, preparation was made for the test facility for main circulator bearings and seals tests, air flow tests of upper and lower core plenums were initiated, and core seismic tests and correlations with structural dynamic analysis was completed. Advanced systems activities including design studies of small modular HTGR concepts also progressed.

Activities relating to the preapplication review and safety research work at the NRC continued in FY'82 with funds appropriated and authorized by the Congress.

The FY'83 program is well on the way toward completing the lead plant conceptual design, schedule and cost estimates, completing the management plan and licensing plan, completing the transfer of steam generator technology to Combustion Engineering, completing analysis of cogeneration plant configurations, and completing licensing criteria review and documentation preparation for submittal to NRC.

The FY'84 HTGR program plan has recently been submitted by the program participants to the DOE and with Congressional funding support, we intend to initiate the preliminary design and standard plant licensing activities, establish the basis for project ownership/financial arrangements, implement the lead project management plan, establish the reference site and initiate early site review with the NRC, complete full-scale core support performance tests in the high temperature helium test loop, initiate a full-scale partial section performance test on the core auxillary cooling system heat exchanger under normal and accident conditions, complete full-scale main circulator bearing and seal tests, and correlate USA and German experimental data in fission product transport characteristics. In the area of advanced systems we intend to initiate conceptual design and development for selected advanced HTGR systems. The spent fuel treatment program will complete spent fuel treatment studies specific to the lead plant and continue the required development program.

The FY'84 budget requirements set forth in the program plan submitted to the DOE for continuation of HTGR Lead project and advanced system activities is $56 million (including $2 million for capital equipment) and $3 million for the spent fuel treatment program. This level of activity is fully consistent with the most effective use of program resources and the initial operation of a Lead Plant by 1997. In recognition of the constraints placed on the Federal budget we, in conjunction with other of the program participants, have also developed a support level which although not meeting all goals would provide for maintenance of critical capabilities and progress on the key critical path activities. That minimum budget would provide a total of $40 million for the HTGR Lead Project, advanced systems and spent fuel treatment program activities (including $2 million for capital equipment). This is approximately the same spending level the Congress appropriated in FY's 1981, 1982 and 1983.

We would also recommend an accelerated HTGR safety research effort at the NRC of $4.5 million, commensurate with the FY'83 NRC Authorization signed into law last year. This level parallels the DOE program submitted for FY'84 and will allow for timely licensing review when the lead plant license application is submitted.

I would now like to turn to the Magnetic Fusion Program.

The past year has been an especially productive one for the GA fusion effort and for Doublet ~~III in~~ particular. The preeminent development was the demonstration on Doublet III of record values of plasma beta. The peak value obtained — 4.5% — represents a factor of two improvement over predecessor experiments and augurs well for the ability to produce desirable power densities in tokamak reactors. Because the question of achievable power density has long been the principal critical issue for the tokamak program, this demonstration has been received with great enthusiasm among fusion researchers.

Scientific successes at GA have been supplemented by advances made at other laboratories. Indeed the richness of the tokamak program has been a major factor in its impressive rate of progress. I urge the Committee to retain this vital feature of the program and to continue to support vigorous toroidal confinement research at MIT, ORNL, PPPL, and GA.

Engineering and technological progress has kept pace with advances on the scientific front. A prime example is the successful implementation of a state-of-the-art 60 GHz electron cyclotron heating system on Doublet III. We have also succeeded in injecting more than 5 MW of neutral beam power into a Doublet III plasma. Program-wide, the most important engineering milestone was the impressive on-time start-up of the Tokamak Fusion Test Reactor at Princeton. This accomplishment is evidence of how far the program has progressed toward readiness to tackle a reactor scale project.

These recent advances, taken together with other funded program elements which are still in the construction stage, are sufficient to propel the magnetic fusion program forward in the near term. In the mid-80s, the two principal vehicles in the tokamak program for demonstrating major progress toward reactor conditions will be TFTR and DIII-D (or Big Dee).

The absence of major new initiatives jeopardizes progress of fusion over the long term. While commitment to a first generation reactor is not possible in the present budgetary climate, the program should take the steps necessary to prepare for this eventuality in order to minimize slippage of the time scale for the ultimate commercialization objective. I recommend two cost effective steps that require modest increments to the FY 1984 Presidential budget. These are:

1) The commitment to develop a conceptual design of a Tokamak Fusion Core Demonstration device, an ignited tokamak that could become operational in the early 1990s. This activity requires an additional $6 million in FY 1984.

2) The establishment of a National Ion Cyclotron Heating Engineering Program to manage the engineering of ion cyclotron heating hardware, regarded as the most promising method for heating tokamak plasmas. The systems developed would be used to push TFTR and Big Dee to their performance limits on a time scale commensurate with providing near term guidance to reactor design. Later, the identical hardware could be used on a reactor. In FY 1984, this program will require an additional $10 million in BA and $5 million in BO.

When these two initiatives are undertaken, the tokamak community will have the program elements in place to support commitment to a reactor tokamak. One further investigation is also warranted in the near term: an evaluation of the options available for gaining experience with longer pulse operation. This strengthening of the tokamak program is important for the U.S. in retaining supremacy in the worldwide effort to harness fusion power.

On the international front our experience on Doublet III, which is now 3½ years into a 5 year cooperative program with the Japan Atomic Energy Research Institute, has been very favorable. The Japanese have gained valuable experience on the operation of an advanced tokamak facility while our program has benefitted greatly from major hardware additions funded by Japan.

The incorporation of the Big Dee into the program, which your Committee has wisely supported, makes us confident that we will provide a progressively increasing role in determining the form tokamak reactors will take. We are equally confident that, with your support, the magnetic fusion program as a whole will continue its steady progress toward providing the nation with an attractive, inexhaustible energy option.

BRIEFING DOCUMENT ON HIGH TEMPERATURE GAS-COOLED REACTOR HTGR PROGRAM

Preface

This document has been prepared by GA Technologies to provide background material on the High Temperature Gas-Cooled Reactor (HTGR) program useful to deliberations on the FY-84 nuclear budget. The HTGR program has maintained strong user support during a period of nuclear power uncertainty because the HTGR can uniquely fulfill a major role in the national energy picture, both as a second generation, safer approach to nuclear electric generation, and to supplement or displace fossil fuels in providing high temperature energy to the process industries.

During the past two years the DOE/industry program has continued to make significant progress in establishing the foundation for proceeding with an HTGR cogeneration lead plant project and in establishing the technological compatibility, environmental, and economic benefits for a number of specific cogeneration applications. Also during this period, the HTGR has been established as a leading candidate to meet the defense program need for a new production reactor.

The program participants (including the utility, process, and supplier industries) strongly urge the Congress to continue government support for the HTGR program in order to insure the availability of this unique option at such time as the institutional barriers to nuclear energy have been overcome.

HTGR Benefits

Multipurpose Energy Roles

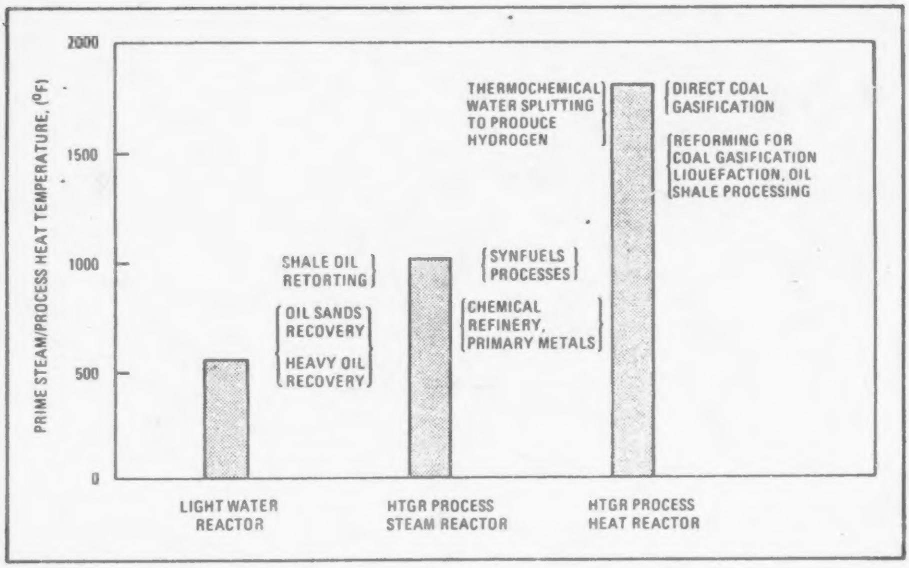
Unique capability for providing high temperature process steam or heat in cogeneration applications

- HTGR can produce 1000°F steam to meet industry needs while cogenerating electric power
- Can displace fossil fuels usage, reduce environmental impact of fossil combustion
- Future higher temperature HTGR process heat systems open additional industrial and synfuel applications for the use of clean, non-polluting nuclear process heat

Higher electricity production performance

- Higher thermal efficiency (up to 40%)
- Requires less uranium

Can contribute to all major energy demand sectors of the economy



Other Benefits

Higher levels of safety, operational and environmental compatibility

- Inherent safety results in maximum protection of public and investment, a basis for improved public acceptance
- Reduced exposures of operating personnel
- Lowest levels of gaseous, liquid and solid waste discharge
- Reduced cooling water requirements
- Improved siting flexibility

Program compatible with potential role of HTGR as a new production reactor

- Essentially all nuclear steam system hardware identical

Program can benefit from major international HTGR activities focused in Germany and Japan and recent strong interest of Japanese government in cooperative HTGR development program

Strong Industry Support

Concept has continuing support of a major segment of the nuclear utility industry, as well as major process industries

Lead plant program directed toward development of primary funding support from the private sector, direct government involvement limited to traditional front-end R & D funding

Industrial participants in program provide their individual strengths through specialized design and component design

HTGR Steam Cycle System

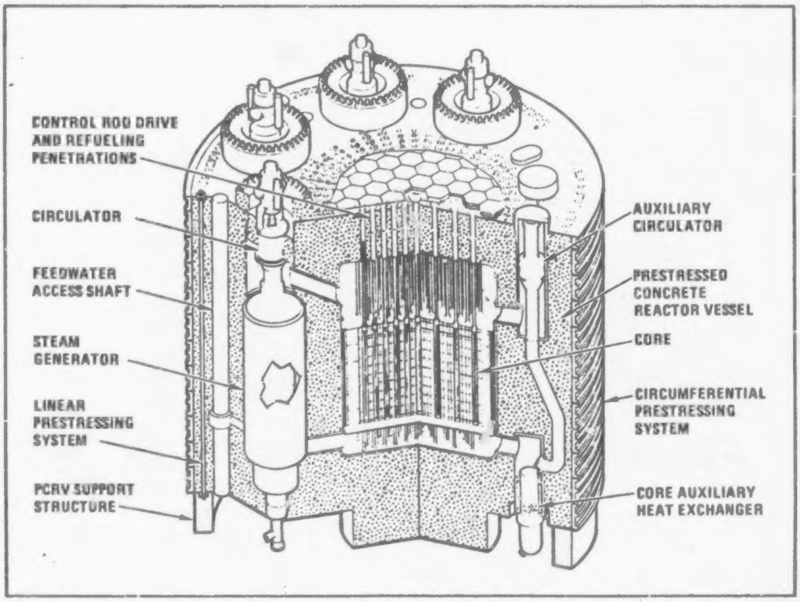
HTGR Reactor

In HTGR systems, helium gas is used as the coolant to remove the heat from the core. In the HTGR-steam electric/cogeneration system the helium is heated to about 1260°F. This heat is transferred in a steam generator to produce steam for process use and/or electricity production. The entire primary system including steam generators, helium circulators, and auxiliary heat exchangers, is housed within the thick-walled prestressed concrete reactor vessel. The fuel is contained in hexagonal graphite blocks, several thousand of which are stacked to make up the reactor core. Because of the systems high temperature capability, superheated steam can be produced, contributing to the thermal efficiency of about 40%, which is highest of any nuclear plant.

Standard Loop Design Allows Multiple Unit Rating

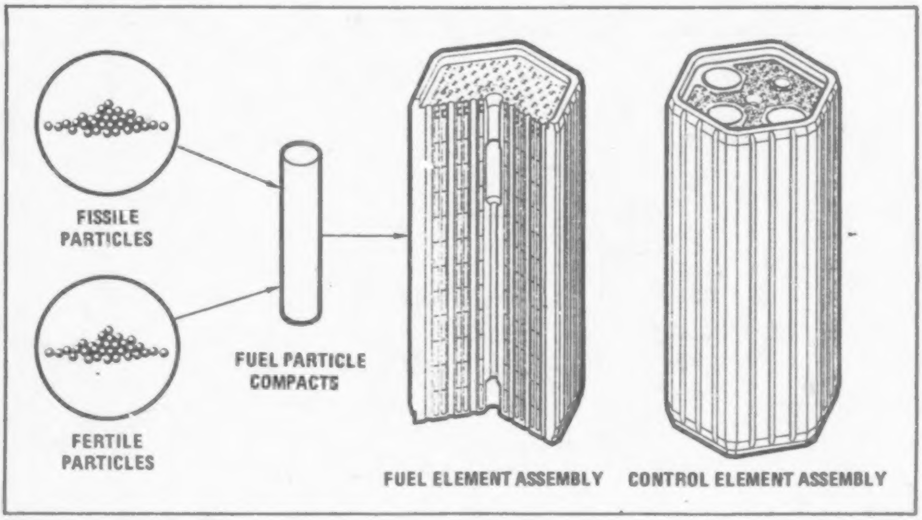
Using varying numbers of loops, HTGR system designs are available in ratings to match broad user needs

- 2 loop – 1170 MW (t) – 440 MW (e)
- 4 loop – 2240 MW (t) – 860 MW (e)
- 6 loop – 3360 MW (t) – 1300 MW (e)


CONTROL ROD DRIVE AND REFUELING PENETRATIONS
CIRCULATOR
FEEDWATER ACCESS SHAFT
STEAM GENERATOR
LINEAR PRESTRESSING SYSTEM
PCRV SUPPORT STRUCTURE
AUXILIARY CIRCULATOR
PRESTRESSED CONCRETE REACTOR VESSEL
CORE
CIRCUMFERENTIAL PRESTRESSING SYSTEM
CORE AUXILIARY HEAT EXCHANGER

HTGR Fuel

HTGR fuel is made up of tiny microspheres of uranium and/or thorium, oxides or carbides, each of which is coated with pyrocarbon and silicon carbide to retain fission products. These particles are mixed with a binder and formed into small compacts, (about 1/2 in. dia. × 2-1/4 in. long). The compacts are sealed into fuel cavities running vertically through 31 in. high hexagonal graphite fuel elements. The active core consists of stacks of these graphite fuel elements through which the helium coolant flows in vertical channels.


FISSILE PARTICLES
FERTILE PARTICLES
FUEL PARTICLE COMPACTS
FUEL ELEMENT ASSEMBLY
CONTROL ELEMENT ASSEMBLY

Fuel cycle cost advantage under comparable conditions

- Costs competitive in stow-away mode
- Cost benefits increase with increasing yellowcake (U_3O_8) costs and with recycle

Extends U_3O_8 resource base

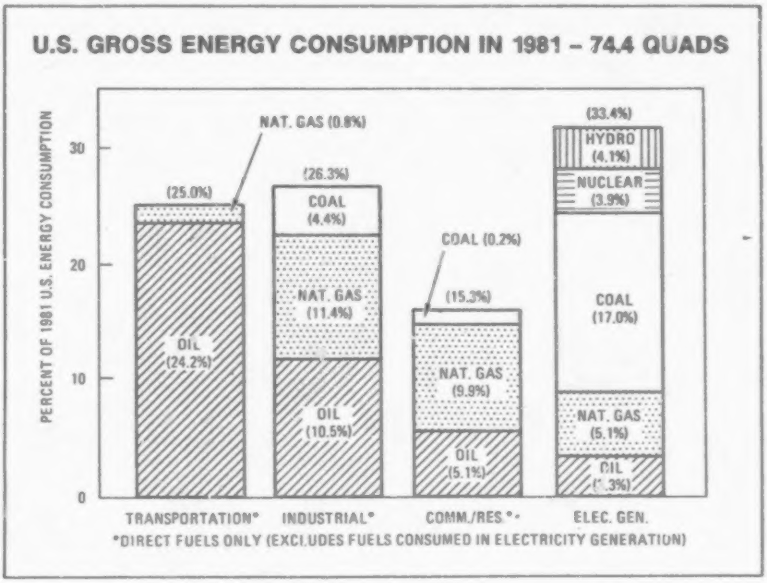
- Uses 25% to 50% less uranium than LWR depending on fuel cycle mode

Flexible uranium/thorium fuel cycle

- Can use either low or high enriched uranium cycle

Cogeneration Market

About 20 quads (26%) of the total U.S. gross energy consumption in 1981 was in the industrial sector, with the primary fuels being oil and natural gas. If electricity generated to meet industrial needs is also included, the total industrial energy consumption in 1981 was about 26 quads (35%). To avoid increases in production costs due to escalating oil and gas prices and to meet projected changes and growth in new and existing industrial processes, industry will be forced to turn to coal and nuclear fuels as alternate energy sources.



U.S. GROSS ENERGY CONSUMPTION IN 1981 – 74.4 QUADS

*DIRECT FUELS ONLY (EXCLUDES FUELS CONSUMED IN ELECTRICITY GENERATION)

Industrial energy requirements

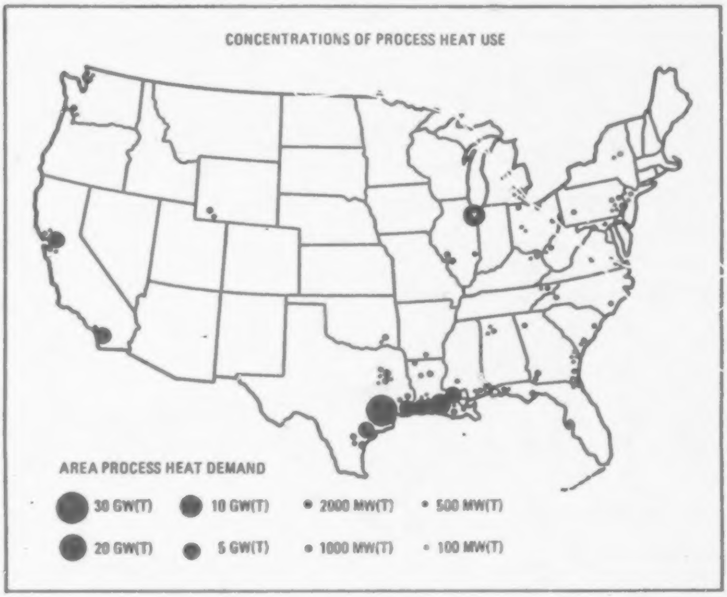
- About 15 quads (77%) of the requirements are at temperatures of 1000°F or less
- About 9 quads (44%) of the requirements are in the form of steam

Process industries require both steam and electricity

An HTGR variable cogeneration plant can accommodate most industrial applications

Markets For Process Steam Are Concentrated

Recent studies identified current locations at which combined industrial steam requirements offer potential for the use of centralized HTGR plants to supply nuclear process steam and cogenerated electric power.


CONCENTRATIONS OF PROCESS HEAT USE
AREA PROCESS HEAT DEMAND
30 GW(T)
10 GW(T)
2000 MW(T)
500 MW(T)
20 GW(T)
5 GW(T)
1000 MW(T)
100 MW(T)

A single 1170 MW (t) HTGR cogeneration system can provide up to 2,500,000 lb/hr of process steam and from 115 to 410 MW of electricity

Future HTGR Cogeneration Market Potential Large

During the 2000-2020 time period, the total potential process steam market has been estimated at over 100 equivalent HTGR units of the 1170 MW (t) size. These units would be deployed to provide cogenerated steam and electric power for industrial applications. Another potential market exists for higher temperature HTGR process heat systems to meet additional high temperature needs such as the production of synthetic fuels and hydrogen.

HTGR Safety and Environmental Features

Higher safety level of HTGR results from inherent physical and nuclear properties

- Massive graphite core provides slow temperature response, does not require fast acting shutdown system
- Graphite core and ceramic fuel stable to extreme temperatures
- Non-reactive helium coolant
- Massive, redundant, prestressed concrete reactor vessel
- Inherent shutdown mechanisms (large negative temperature coefficient)

Inherent features are supplemented with engineered safety systems

- Independent auxiliary cooling system
- Independent emergency reactivity shutdown system
- Reactor containment building

Ample time to respond to loss of core cooling

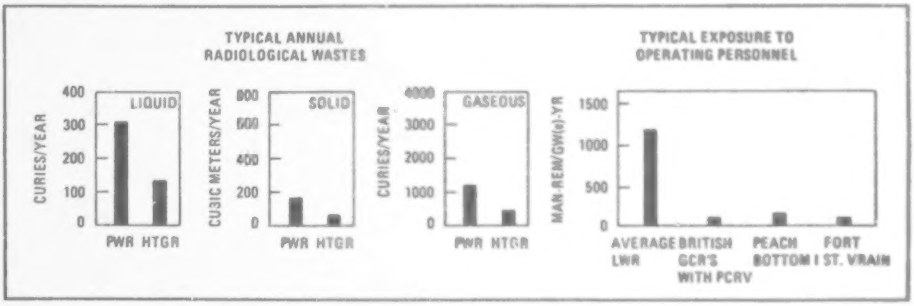
- Hours instead of minutes before damage to core

Reduced radioactivity wastes

- Helium cooled HTGR plants inherently release into the plant process streams less radioactivity than an LWR

Significantly reduced operator exposure

- Experience at Peach Bottom I, Fort St. Vrain and Gas-Cooled Reactors in the U.K. indicate that radiation exposures to operating and maintenance personnel will be about 1/10 of those for an LWR



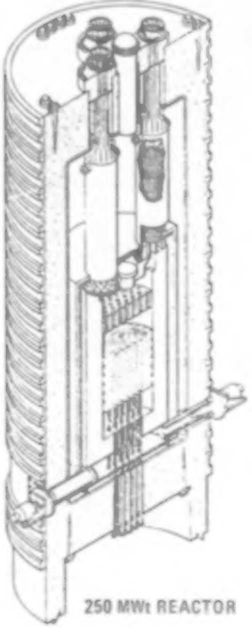
HTGR Advanced Systems

The HTGR steam cycle will provide a technical base for advanced systems with higher operating temperatures. Two such systems are the process heat and small modular reactor.

HTGR-Process Heat

The process heat HTGR provides helium core outlet temperatures of 1472° to 1652°F. An intermediate heat exchanger transfers the heat to a secondary helium loop incorporating a reformer that can be used to react steam and methane to form hydrogen and carbon monoxide, a reducing gas that can be integrated into such processes as oil shale retorting, coal liquefaction, and coal gasification, to produce transportation liquids, ammonia or synthetic pipeline gas. At higher core outlet temperatures (1652° to 1832°F) the reforming reaction can be performed more efficiently and a direct steam-coal reaction can be utilized to produce high-Btu gas or hydrogen via thermochemical water-splitting.

Small Modular HTGR



250 MWt REACTOR

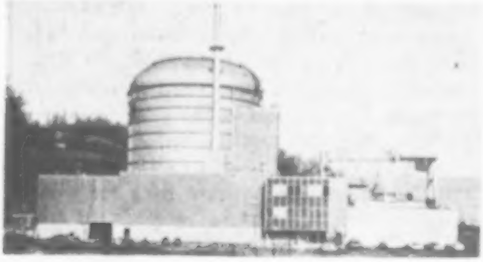
Small [250 MW (t)] modular HTGR systems (both steam cycle and reforming versions) are under assessment. The steam-cycle/ cogeneration system consists of a reactor core and primary loops housed in either a steel or prestressed concrete reactor vessel. The primary coolant loop contains steam generators and horizontally mounted helium circulators. This equipment is arranged to promote natural circulation shutdown cooling of the core. In the reformer version of the small modular HTGR, an integral steam generator/reformer replaces the steam generator in the upper section of the reactor vessel.

Technology Background

United States Program

Substantial experience, technology, and test and manufacturing facilities currently exist in U.S.

Peach Bottom Unit 1

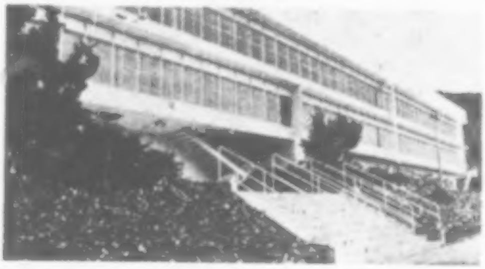


40 MW(e) Peach Bottom Unit 1 HTGR was operated successfully by Philadelphia Electric Company from 1967 to 1974, when plant was shut down for decommissioning after completing planned demonstration program.

Test Facilities

HTGR test facility compound, including air flow test facility, component test tower, PCRV models, tendon test facility, PCRV wire-winding machine, and helium circulator test facility

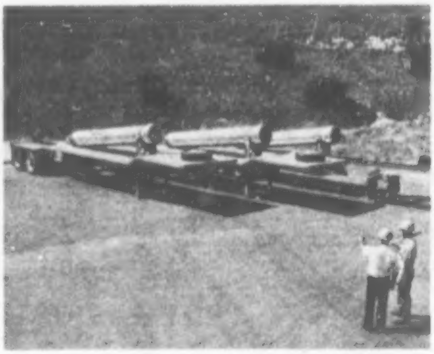
Manufacturing Facilities



Facilities available for manufacture of HTGR fuel

Fort St. Vrain

- Obtained 100% power license on October 5, 1982
- Has operated at full power with over 38.5% thermal efficiency
- All plant systems and components have performed at design conditions
- Has generated over 3 billion kW hrs of net electrical energy to date
- Fuel performance excellent, activity in helium coolant less than 2% of design limit
- Average annual personnel exposure rate significantly less than in LWR plants, despite virtually unlimited personnel access into reactor building and absence of secondary containment
- Two segments of discharged fuel shipped to HTGR dry storage facility at Idaho Chemical Processing Plant with no problems. First operational AFR storage in U.S.



Program Funding Through 1982

Funds expended on the HTGR program through 1982, including the construction of the Peach Bottom No. 1 and Fort St. Vrain plants, amount to $1.53 billion dollars. Of this total, $555 million (or 36%) has been supplied by the government and $975 million (or 74%) has come from industry.

International Program

Experience

Substantial international experience on gas-cooled reactor technology supports U.S. program

Germany

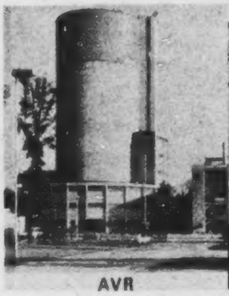
- AVR – 15 MW (e) HTGR with pebble bed fuel has generated 1.2 million MW/hr since startup in 1967
- THTR-300 MW (e) HTGR with pebble bed fuel – PCRV pressure test carried out in September 1982, rise to power scheduled in late 1984
- Broadly based HTGR program with long term goal of nuclear coal gasification, strongly supported by coal/utility industries
- Funding in 1983: $250 million for THTR-300 and $75 million for R & D

United Kingdom

- Over 555 reactor years of operating experience with gas-cooled reactors
- DRAGON – first HTGR, operated from 1964-1975
- AGRs – 8,800 MW (e) program of seven 2-unit stations going well, both in construction and operation
- Hartlepool, Heysham 1 and Dungeness B AGR stations going on line during 1983
- Heysham 2 and Torness AGR stations in construction for operation in 1987-1988

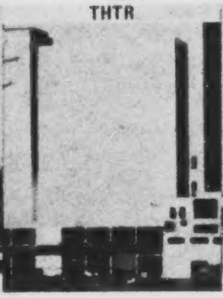
France

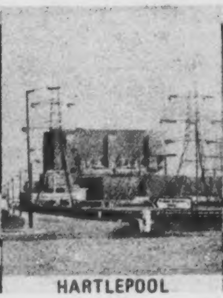
- Over 100 reactor years of operating experience
- Carmen II facility – core-flow and hot duct tests conducted – capability for steam generator boiling stability tests



AVR

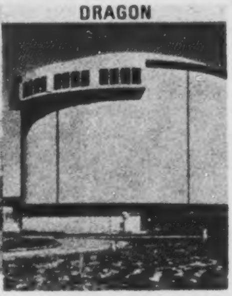
THTR





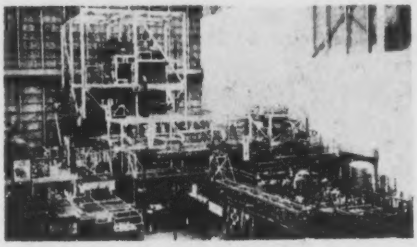
HARTLEPOOL

DRAGON



Japan

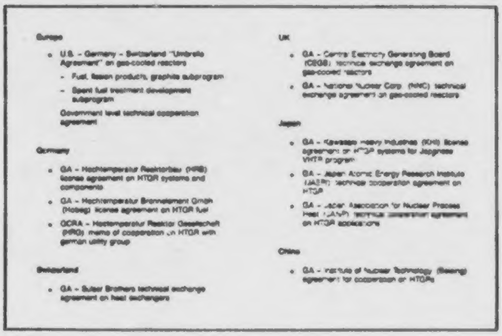
- Multi-purpose very high temperature gas-cooled reactor (VHTR) under development since 1969
- Operation of 50 MW(t) experimental VHTR in 1990 confirmed as goal in government's nuclear energy development program
- Hendel 10 MW helium test loop facility began operation in 1982 at 1000°C temperatures
- Interested in HTGR cooperation with U.S.
- Cogeneration HTGR evaluation initiated by nuclear supplier group in 1982 in cooperation with U.S.



HENDEL

Technical Exchange Agreements

Relevant HTGR experience is brought into the U.S. program through government and industry exchange agreements



Europe

- U.S. – Germany – Switzerland "Umbrella Agreement" on gas-cooled reactors
  - Fuel, fission products, graphite subprogram
  - Spent fuel treatment development subprogram

  Government level technical cooperation agreement

Germany

- GA – Hochtemperatur Reaktorbau (HRB) license agreement on HTGR systems and components
- GA – Hochtemperatur Brennelement GmbH (Hobeg) license agreement on HTGR fuel
- GCRA – Hochtemperatur Reaktor Gesellschaft (HRG) memo of cooperation on HTGR with german utility group

Switzerland

- GA – Sulzer Brothers technical exchange agreement on heat exchangers

UK

- GA – Central Electricity Generating Board (CEGB) technical exchange agreement on gas-cooled reactors
- GA – National Nuclear Corp. (NNC) technical exchange agreement on gas-cooled reactors

Japan

- GA – Kawasaki Heavy Industries (KHI) license agreement on HTGR systems for Japanese VHTR program
- GA – Japan Atomic Energy Research Institute (JAERI) technical cooperation agreement on HTGR
- GA – Japan Association for Nuclear Process Heat (JANPH) technical cooperation agreement on HTGR applications

China

- GA – Institute of Nuclear Technology (Beijing) agreement for cooperation on HTGRs

HTGR Funding Through 1982

	Million $
Federal Republic of Germany	$1,700
Japan	300
France, United Kingdom, Switzerland	250
Total	$2,250

HTGR Program Description

The current government/industry HTGR program, which is focused on the development and demonstration of a commercial-scale HTGR steam cycle cogeneration system, has broad industry, user, and national laboratory involvement

GA Technologies, the world leader in HTGR technology, is the lead industrial firm involved in the program. However, other experienced industrial companies are also directly involved in key areas

- General Electric Company
- Combustion Engineering Company
- Bechtel Group Inc.
- United Engineers & Constructors

HTGR program activities are also conducted at National Laboratories

- Oak Ridge National Laboratory
- Los Alamos National Laboratory
- Brookhaven National Laboratory
- Idaho National Engineering Laboratory

Gas-Cooled Reactor Associates (GCRA), represents the utility/user interests in support of the program, and performs an overall program integration activity for the government

Lead Plant Program

The major fraction of the HTGR program activities are directed toward technology development and design support activities to allow a commitment to an HTGR lead plant project

Objectives

The major objectives of the lead plant project include

- Demonstration of full commercial scale HTGR systems and components including features incorporating technology evolution and Fort St. Vrain operational experience
- Establishing the licensing criteria for follow-on commercial HTGR systems
- Confirming incentives of the HTGR nuclear system for electric production and cogeneration
- Establishing a broad industrial infrastructure to support a subsequent commercial HTGR industry

Schedule

The lead plant program schedule is dependent upon the level of funding available but is directed toward completion of project definition activities and a conceptual design in 1983 with commercial operation in the 1996 to 1997 period.

Lead Plant Funding Approach

A key project definition phase task is to develop management, funding, and risk sharing arrangements

- Industry to bear the major portion (commercial value) of the lead project costs
- Direct government participation limited to front-end support of design and development
- HTGR lead plant project costs are estimated to total about $2.14 billion (in 1983 dollars), with $506 million (or 24%) coming from the government and $1,635 million (or 76%) being furnished by industry.

Other Program Activities

In addition to primary efforts on base technology development and the steam electric/cogeneration lead plant project design and applications, the HTGR program also includes other secondary and complimentary activities

- Conceptual design of higher-temperature versions of the HTGR (e.g., reforming process heat HTGR)
- Feasibility assessment of small [approx. 250 MW (t)], modular HTGR systems for electric/cogeneration and process heat applications
- Investigation of waste treatment and spent fuel storage for near-term closure of the HTGR fuel cycle, plus continued development of technology for eventual reprocessing of HTGR-type uranium/thorium fuel elements
- Development of safety/licensing criteria specific to the HTGR, and review of long-range research plans for verification of HTGR safety
- International cooperation

Utility and Industry Support

Electric Utility Support Thru GCRA

- In 1978 a utility organization, Gas-Cooled Reactor Associates (GCRA), was formed to provide support and guidance to program. GCRA utilities currently represent over 30% of installed electric generating capacity in United States, over 25% of on-line nuclear capacity and about 40% of nuclear capacity now under construction.

American Public Power Association
Arizona Public Service
Colorado-Ute Electric Association
Delmarva Power & Light
Empire State Elec. Energy Research Corp.
    Central Hudson Gas & Electric
    Consolidated Edison
    Long Island Lighting
    New York State Electric & Gas
    Niagara Mohawk Power
    Orange & Rockland Utilities
    Rochester Gas & Electric
Florida Power & Light
Gulf States Utilities
Idaho Power
National Rural Electric Cooperative Association
Northeast Utilities
    Connecticut Light & Power
    Hartford Electric Light
    Western Massachusetts Electric
    Holyoke Water Power
Pacific Gas & Electric
Pacific Power & Light
Philadelphia Electric
Public Service of Colorado
Public Service of New Mexico
Public Service Electric & Gas
Puget Sound Power & Light
Salt River Project
San Diego Gas & Electric
Tennessee Valley Authority

Industrial User Support

- In 1979 a group of major industrial firms formed a process heat users group to support continued development of HTGR. Most of these companies merged into a process heat advisory committee established by GCRA in 1981

Allied Chemical
Consolidated Natural Gas Service
Gulf Oil
Inland Steel
Kaiser Aluminum & Chemical
Mobil Research & Development
Owens-Corning Fiberglass
Scallop Coal
United Gas Pipe Line

In August 1982 GCRA sponsored its fourth annual HTGR utility/user conference, which was attended by over 200 representatives of industry, government, and utilities from 75 organizations and six countries.

GCRA
Group, Inc
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FY-82 HTGR Program Accomplishments

HTGR Steam Cycle/Cogeneration Lead Project

- Identified multiple lead project candidates through site-specific/application studies
- Established lead project strategy plan as framework for lead project deployment
- Established initial baseline for design and technology development activities through broad review by program participants
- Completed 60% of conceptual design
- Advanced vendor/supplier team through GA subcontract arrangements with CE for heat exchanger support and GE for circulator support

Technology Development

- Completed construction of developmental coater for LEU fuel particles
- Completed prototypical processing units for fuel kernel manufacturing
- Performed testing of core models and incorporated design changes to eliminate fluctuations
- Prepared test facility for main circulator bearings and seals tests
- Initiated air flow tests of upper and lower core plenums
- Completed core seismic tests and correlations with structural dynamic analysis

Advanced Systems

- Initiate design studies of small modular HTGR concepts
- Initiated development of new wrought alloys for high temperature applications

Spent Fuel Treatment Program

- Performed several test runs in cold pilot plant
- Completed tests on head end treatment of German pebble bed fuel

NRC Safety/Licensing Activities

- Completed topical reports on HTGR safety for NRC review
- Initiated source term study for HTGR

FY-82 NATIONAL PROGRAM FUNDING

FOR HTGR APPLICATIONS AND BASE TECHNOLOGY	*$35 MILLION*
FOR SPENT FUEL TREATMENT PROGRAM	*$ 3 MILLION*
FOR NRC SAFETY/LICENSING ACTIVITIES	*$ 4 MILLION*

FY-83 HTGR Program

HTGR Steam Electric/Cogeneration Lead Project

- Advance lead project candidates and lead project strategy plan through site-specific and application studies
- Complete conceptual design, schedule, and cost estimates with associated documentation
- Complete management plan and licensing plan for lead plant project
- Complete transfer of steam generator technology to Combustion Engineering
- Complete analysis of cogeneration plant configurations
- Complete licensing criteria review and prepare documentation for submittal to NRC

Technology Development

- Perform hot cell destructive examination of FSV test fuel element
- Demonstrate pilot-scale LEU fissile kernel process through final heat treating
- Perform tests on improved fuel element design to verify elimination of core temperature fluctuations
- Complete 1/6 scale air flow model test of the core lower plenum, steam generator inlet sections and auxiliary heat exchanger inlet sections
- Complete a seismic test on full-scale section of steam generator helical bundle

Advanced Systems

- Complete preconceptual design of small modular reactors for cogeneration and process heat applications
- Establish advanced systems design and technology development requirements

Spent Fuel Treatment Program

- Complete fluid-bed burner off-gas treatment test program
- Complete lead plant spent fuel transportation/storage/processing studies

NRC Safety/Licensing Activities

- Interact with NRC on source term study and safety research program

FY-83 NATIONAL PROGRAM FUNDING:

FOR HTGR PROJECT AND BASE TECHNOLOGY	*$36 MILLION*
FOR SPENT FUEL TREATMENT PROGRAM	*$ 3 MILLION*
FOR NRC SAFETY/LICENSING ACTIVITIES	*$ 4 MILLION*

Recommended FY-84 HTGR Program

HTGR Steam Electric/Cogeneration Lead Project

- Initiate preliminary design and licensing phase
- Establish project ownership/financial arrangements
- Implement lead project management plan
- Establish reference site (s) and initiate early site review with NRC
- Complete full-scale core support performance test in high temperature helium test loop
- Initiate full-scale prototype hot duct test in high temperature helium test loop
- Initiate full-scale partial section performance test on the core auxiliary cooling system heat exchanger under normal and accident conditions
- Complete full-scale main circulator bearing and seal test
- Correlate USA and German experimental data in fission product transport characteristics

Advanced Systems

- Initiate conceptual design and development for selected advanced HTGR system with emphasis on international cooperation

Spent Fuel Treatment Program

- Complete spent fuel treatment study for lead plant and continue required development program

NRC Safety/Licensing Activities

- Initiate standard plant issue review
- Continue safety research and licensing criteria development

RECOMMENDED FY-84 NATIONAL PROGRAM FUNDING:

FOR HTGR LEAD PROJECT AND ADVANCED SYSTEMS	*$37 TO 56 MILLION*
FOR SPENT FUEL TREATMENT PROGRAM	*$ 3 TO 5 MILLION*
FOR NRC SAFETY/LICENSING ACTIVITIES	*$ 3 MILLION*

(LOWER VALUE REPRESENTS THE CRITICAL CAPABILITIES LEVEL)

HIGH-TEMPERATURE, GAS-COOLED REACTOR PROGRAM

STATEMENT OF R. F. WALKER, CHAIRMAN, GAS-COOLED REACTOR ASSOCIATES, AND PRESIDENT, PUBLIC SERVICE CO. OF COLORADO

Senator JOHNSTON. Next, we will have Mr. R. F. Walker, chairman of the Gas-Cooled Reactor Associates, which operates the reactors at Fort St. Vrain.

Welcome.

Mr. WALKER. Thank you, it is my pleasure to be here, and I have a detailed statement which will be submitted for the record.

HTGR is an advanced nuclear power system we believe offers distinct advantages over existing systems. We look at this as the nuclear machine of the future and possibly the lead in the second coming of nuclear energy, which I feel will come to this country.

Many of the advances and protection in radiation exposure have been demonstrated at our plant, which now has permission to operate at 100 percent and has operated at that level successfully. One of the most outstanding features is the low radiation levels for our workers. In 1982, of the 1,000 badges, people badged, only 22 badges had any measurable radiation exposure at all.

HTGR program is focused on the lead plant as the last step of the technology which would come in the mid-1980's. We have lead plants identified, and construction identified, and the strategy plan provides for a cost sharing as Dr. Agnew pointed out, about 23 percent from the Government and 75 percent from the private sector. This work would be for some first-of-a-kind testing of things that need to be done. Technical progress is being accomplished with completion of the design in 1983.

Continued congressional support and establishment of support within the administration are critical to the lead projects success and certainly critical to keeping this energy option open for us.

We urge the subcommittee to continue budget appropriations for the HTGR, both at DOE and the Nuclear Regulatory Commission.

FUNDING REQUIREMENTS

We support the private-sector initiative for this project. Strong emphasis in 1984 will be on testing components, the minimum funding level we feel adequate for 1984 is $40 million. Certainly a more cost-effective amount will be $59 million, but in the interest of keeping the program going, we are only asking for the $40 million this year for the DOE funding.

In the NRC appropriations, we are asking to support $3 million for the licensing effort.

The GCRA group, which represents about a third installed generating capacity in the United States, has budgeted $3 million for the development of integration services next year, and my own company spent about $14 million in 1982 on improvement at our facility. We also budgeted some $20 million this year to continue to improve the Fort St. Vrain plant so we continue to get the information that is appropriate for the design of this project.

We certainly appreciate the fine support we have had from this subcommittee over the years and look forward to working with you in the future and we appreciate your time.

Senator JOHNSTON. Thank you very much, Mr. Walker.

I am sorry we do not have time for questions, but we have a lot of witnesses over a short period of time. However, as you know, I am a strong supporter of your program and the HTGR.

[The statement follows:]

STATEMENT OF RICHARD F. WALKER, PRESIDENT, PUBLIC SERVICE CO. OF COLORADO, AND CHAIRMAN, GAS-COOLED REACTOR ASSOCIATES

Mr. Chairman and Members of the Subcommittee, my name is Richard F. Walker, and I am President of Public Service Company of Colorado and Chairman of Gas-Cooled Reactor Associates (GCRA). I appreciate the opportunity to present Utility/User support for the High-Temperature Gas-Cooled Reactor (HTGR) Program. I would like to briefly outline our funding requirements in FY 1984 for the HTGR Program. We are requesting $59 million in FY 1984 DOE appropriations, which includes $2 million for R&D capital equipment and $3 million for spent fuel treatment activities. In addition we recommend $3 million in funding for HTGR-related activities at the NRC. These funding levels are necessary in order to advance the HTGR Lead Project on a timely basis consistent in the Lead Project Strategy Plan, which has been submitted to Congress and the Department of Energy.

The Utility/User industry through GCRA, in conjunction with a broad sector of the nuclear industry and strong nonpartisan Congressional support has been striving to maintain a viable HTGR Program. The focus of this effort has been the development of a 2240 MW(t) Steam Cycle/Cogeneration (SC/C) Lead Project. In addition to its demonstrated application for highly efficient electricity generation, the HTGR-SC/C system is ideally suited to cogeneration applications with various industrial processes that are presently dependent on fossil energy resources. Both of these applications incorporate a single, standardized HTGR nuclear steam supply system. As an advanced, second generation nuclear power system, the HTGR offers important advantages with regard to inherent safety and low environmental impact. These features result in less reliance on engineered safety systems, added margins for meeting certain licensing criteria, greater siting flexibility, and reduced radiation exposure to plant personnel. Further, given the multibillion dollar investment of central power plants today, the HTGR's inherent safety provides important plant investment protection to both shareholders and rate payers.

As you are well aware, financial and regulatory difficulties and reduced growth in many parts of the country have resulted in the deferral or cancellation of numerous generation facilities during recent years. The industry's inability to build new capacity in the near-term implies a strong future demand for replacement and new power plants when the financial and regulatory environments are more receptive. In the interim, it is essential that the Nation maintain the foresight for continuing the development of promising energy alternatives such as the HTGR.

To date, the U.S. has invested about $1.5 billion on the HTGR. Of this total the private sector has spent approximately $1.0 billion. This support has been instrumental in the design and construction of two HTGR facilities: the Peach Bottom developmental plant which was operated by the Philadelphia Electric Company and the Fort St. Vrain demonstraton plant which is currently operating and providing electricity for the Public Service Company of Colorado (PSC).

With regard to the Fort St. Vrain plant, I am pleased to report that in November 1982 the NRC granted authorization for the plant to routinely operate at 100% power or 330 MW(e). As you know, the Fort St. Vrain power plant first went critical in January 1974 and has operated at near 70% power since January 1978. Operation was restricted to 70% capacity by the NRC until technical issues associated with core temperature fluctuations were resolved. With core restraining devices installed, a successful full power test run was authorized by the NRC and completed in November 1981. All plant systems and components performed at or near design conditions during the full-power test run. Based on these test results, PSC applied for and was granted NRC authorization to routinely operate the plant at the 100% power level. We are currently operating the plant at 70% of capacity as the result of a conscious management decision based on several factors, including the fuel warranty agreements with GA Technologies. As of year-end 1982, the Fort St. Vrain plant has delivered over 3 billion kilowatt-hours of net electrical energy.

Fort St. Vrain has provided critical confirmation and demonstration of many key HTGR concepts. In particular, fuel integrity and radiation exposure to plant personnel have had an exceptional operating record. Operating data indicate that the amount of radioactivity carried in the helium coolant has been less than two percent of the design limit, demonstrating the structural integrity of the coated fuel particles and the graphite core structure. A comparison of personnel exposure data for Fort St. Vrain and light water reactor plants in the U.S. indicates that Fort St. Vrain has had an average annual person-rem exposure rate per GW(e)-year of less than two percent of the average exposure rate in light water reactor plants. This low personnel exposure level is even more significant in view of the fact that Fort St. Vrain has virtually unlimited access into the reactor building for all operations and maintenance personnel. Other major contributions of Fort St. Vrain have been in the areas of core physics confirmation, plant control and response, and plant performance at high temperatures. Plant operating experience to date has demonstrated predictable, easily managed performance even during extreme modes of operation including temporary loss of forced cooling. The high core heat capacity has shown temperature transients to be slow, predictable, and easily controlled. Operation to date has achieved 1400°F primary loop helium temperatures, 1000°F steam temperatures, and a net efficiency of 38.5%--the highest of any nuclear plant in the U.S. We are confident that Fort St. Vrain will continue to provide valuable kilowatt-hours for the customers of PSC as well as critical information regarding the demonstration of many HTGR concepts. My company is proud of our role as owner/ operator of Fort St. Vrain.

During the past year, significant progress has been achieved in advancing the HTGR-SC Lead Project that will be the final step in commercializing the steam cycle based HTGR technology. Last July, eight senior GCRA utility executives representing five HTGR Project candidates, sent a letter to OMB Director Stockman and past DOE Secretary Edwards confirming their interest to move ahead with an HTGR Lead Project initiative. These five regional project candidates are summarized as follows:

1. In the Intermountain Region, Idaho Power Company, Public Service Company of Colorado and Colorado-Ute Electric Association would utilize the HTGR-SC/C system to meet new generation requirements. Evaluation studies have focused on the potential of such a Project located at or near the Idaho National Engineering Laboratory (INEL). Such a Project would centralize the generation capacity for sharing throughout the Intermountain Region and utilize the associated resources at INEL. In addition, the INEL site has the growth potential for a nuclear energy park with associated fuel cycle facilities and cogeneration applications. Alternatively, an Intermountain Project could be located at the Fort St. Vrain site that would accommodate a second HTGR with the attendant benefits of direct experience transfer from the Fort St. Vrain demonstration plant.

2. In the Gulf Coast Region, Gulf Oil Refining and Marketing Company has evidenced interest in the HTGR-SC/C system as a source of cogenerated steam for its Port Arthur refinery, assuming other industrial users in the area indicate similar desires. In addition, the HTGR plant would provide electricity to the Gulf States Utilities' grid. Ongoing Project evaluation studies have indicated the feasibility of the refinery's transition from gas and oil to a central station cogeneration facility, identified potential sites proximate to the refinery, and are addressing the key institutional issues of ownership and financial arrangements.

3. In the Southeast Region, Florida Power and Light has an interest in the HTGR-SC/C system for future generation capacity at their South Dade site. This site is located in the environmentally sensitive area of Southeast Florida near large load centers experiencing rapid growth. A siting evaluation has been conducted to quantify and confirm the siting advantages of the HTGR at this site. Bob Uhrig is here today to address the Florida Power and Light interest in the HTGR.

4. In the Mid-Atlantic Region, Public Service Electric and Gas and Philadelphia Electric Company have an interest in the future electric generation and cogeneration applications of the HTGR-SC/C system. In the cogeneration application, the HTGR-SC/C system would supply process steam to industrial customers seeking to expand and/or shift from in-house gas and oil reliance or to potentially new synthetic fuel industries. Project evaluation studies have identified the cogeneration potential of the HTGR-SC/C system to such applications.

5. In the Southwest Region, Arizona Public Service (APS) has an interest in the HTGR-SC/C to meet future electric generation requirements. APS has three large nuclear reactors under construction at the present time with the last one scheduled for operation in 1986. The site at Palo Verde, west of Phoenix, is adequate to receive two additional units and is ideally suited for the HTGR. The critical water situation, siting requirements and expected need for power in the 1995-2000 time period add importance to APS's interest in the HTGR.

These identified Utilities/Users have an interest in and need for an HTGR system that would be deployed in the middle to late 1990's; hence, warranting progressive commitments during the next few years. In order to provide a framework for analyzing the financial and organizational structure required for a viable Project, GCRA in cooperation with the other Program participants has prepared a Lead Project Strategy Plan which outlines a proposed approach for completing the Project, including proposed cost and risk sharing arrangements between the public and private sectors. The July letter to Stockman and Edwards forwarded a copy of the Lead Project Strategy Plan. Both the letter and the Plan are available upon request.

The Strategy Plan poses a phased commitment to the Lead Project whereby all parties progressively develop their role and financial commitment based on solid technical and economic information, as well as institutional arrangements developed during each Project phase. The intent of this strategy is that a private sector entity will support the Lead Plant costs and risks to the extent of its commercial value. In addition, the Utility/User industry, through GCRA and EPRI, will support a share of front-end costs associated with the Lead Project. Vendor/supplier support for the Lead Project will come from an industrial team that will provide the design and manufacturing capabilities required for the Project. The vendor/supplier team would share in the Lead Project risks through firm prices on the nuclear steam supply system, including associated components and fuel supply, and provide a broad vendor/supplier infrastructure for subsequent HTGR plants. GA Technologies is committed to playing a key leadership role in establishing this vendor/supplier team. Government financial support is required for the first-of-a-kind design and technology development for systems, components, and fuel cycle. Additionally, it would provide Project financing support to offset first-of-a-kind costs and risks associated with the Lead Plant. The intent is to finance the Lead Project through a cooperative private/public sector effort with the private sector paying the major fraction, approximately 75%, of the total Lead Project costs.

In addition to the Utility/User support for a Lead Project, there has been significant progress with all elements of the HTGR Program. Utility/User financial support through GCRA and EPRI continue to grow. The utility industry spent approximately $2 million in 1982 and has budgeted about $3 million for the Program in 1983. The bulk of these resources support a full-time staff that provides Project development and integration services to the HTGR Program. In addition, the Public Service Company of Colorado has spent approximately $14 million in 1982 and has budgeted about $20 million in 1983 for Fort St. Vrain improvements that support the continued invaluable demonstration role of this plant. The vendor/supplier support has broadened and strengthened, as reflected by the increasing involvement of General Electric and Combustion Engineering along with GA Technologies for the Lead Plant's design and development activities. Even though the HTGR Program has been excluded from the Administration's budget proposals, the DOE has been supportive of the Lead Project initiative and has increasingly focused the available budget resources toward the critical path technical requirements of the Lead Project. In addition, NRC activities are responsive to the Lead Project's licensing criteria development requirements, as reflected in their HTGR Safety Research Program Plan.

With respect to government support for FY 1984, GCRA urges the Senate Subcommittee on Energy and Water Development to provide the DOE budget authority necessary to continue to advance the HTGR-SC/C design and technical programs and support the industry's Lead Project development activities. Your continued support in FY 1984 is crucial in our efforts to stabilize the roles of industry and government which are necessary to establish the HTGR option. To accomplish this the following tasks are scheduled during the balance of FY 1983 and in FY 1984: (a) refine and advance the Lead Project Strategy Plan, with special emphasis on establishing acceptable financial and ownership arrangements to all parties; (b) continue development of multiple Lead Project candidates through site specific application studies; (c) complete and implement the Lead Project Management and Licensing Plans; and (d) advance the Lead Plant design through the existing baseline structure, including completion of the conceptual design, the initiation of the preliminary design and licensing, and the continuation of the fuel and component testing activities. It is also important to continue work on promising advanced HTGR systems. In particular, the Program should continue to advance the modular HTGR system by completing the concept evaluation of the modular system and to establish design and technology development requirements. For all these activities, every effort should be made to continue international cooperation with Germany and expand cooperation with Japan and others to minimize costs and risks of HTGR development. A minimum DOE budget level of $37 million, which includes $2 million for R&D equipment, is required to adequately support the technology development activities in FY 1984. In addition, support should continue for the HTGR thorium fuel cycle development. Work in this area should emphasize spent fuel management and continuing the cooperative technical programs with the Federal Republic of Germany. These activities will require $3 million in FY 1984.

In addition, it is important that the Subcommittee continue to appropriate funds in FY 1984 for HTGR-related activities at the NRC. In FY 1984 we are requesting $3 million in order that the NRC can continue its present efforts to develop the criteria and bases for licensing the HTGR-SC/C Lead Plant as well as support any Fort St. Vrain licensing development issues. In particular, the NRC program should include (1) the establishment of general design criteria, siting criteria, and siting source terms; (2) the development of NRC positions on changes to the Standard Format and Content of Safety Analysis Reports for HTGRs, HTGR-related code cases, and regulatory guide modifications; (3) the development of technical information so that the basis for licensing HTGRs will be clear; and (4) the early review of candidate Lead Plant site(s). The timely conduct of these activities at NRC is crucial to assuring a stable licensing process for the HTGR Lead Plant. This effort should be coordinated with the DOE funded Lead Plant development activities to assure the efficient use of national resources.

Mr. Chairman, we recognize that these budget recommendations must be considered in the context of a constrained budgetary and economic environment and in the absence of an Administration budget request to fund the HTGR Program. However, we feel that industry support for the Program and the need to maintain the HTGR option is stronger than ever. We have carefully evaluated our budget recommendations and have limited the requested funding to be consistent with the Administration's intent to freeze FY 1984 budget outlays to FY 1983 levels. If we were to proceed with the Lead Project in the most cost-effective manner, a DOE budget of $59 million would be required in FY 1984, which includes $2 million for capital equipment and $3 million for spent fuel treatment activities . This funding level would clearly signal Congressional support for the Lead Project initiative and provide the basis for greater private sector support in 1983 and 1984. We respectfully request that the Subcommittee on Energy and Water Development consider this proposed funding level in the course of the FY 1984 budget process.

Mr. Chairman, we appreciate the opportunity to present the Utility/User viewpoint to your Subcommittee. With your continued support, we will continue to make real progress toward the realization of the HTGR technology.

FEDERAL ENERGY RESEARCH AND DEVELOPMENT PROGRAMS

STATEMENT OF JOHN CASAZZA, FORMER CHAIRMAN, INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

Senator JOHNSTON. Next, we want to welcome Mr. John Casazza, former chairman of the Institute of Electrical and Electronics Engineers.

Mr. CASAZZA. Good morning, Mr. Chairman. In the interest of saving time, if it is acceptable to you, I would like to just give you a brief summary of our ideas and then enter into the record a more detailed record.

Senator JOHNSTON. That would be preferable.

Mr. CASAZZA. Thank you.

My name is John A. Casazza, and I am appearing before you today on behalf of the Institute of Electrical and Electronics Engineers (IEEE). This institute has an energy committee, which I chaired from 1981 to 1982. It is the world's largest engineering society; we have over 230 members, who live in the United States. Through our testimony today, I would like to provide this committee with the institute's perspective, what these professionals think about the nature of the current U.S. energy problems; and I will provide you with some thoughts as to the steps we think the Federal Government should take to alleviate this problem.

We would like to see actions taken to increase the efficiency of energy use in this country and to diversify our energy sources. Those are the two key areas.

We do not believe that free market forces alone will achieve these results. We believe that Government policy and actions are needed to assist these free market forces.

With regard to energy efficiency, if we continue to improve our energy use at the rate existing over the past 50 years, we will be using about 37 percent more energy in the year 2000 than if we continue the rate of improvement that has existed for the past 10 years.

Now, to continue this rate that existed in the past 10 years, we are going to need accelerated investment in energy efficient equipment, including such things as advanced coal combustion technics, transmission and DC transmission, better burnup of nuclear fuel in our light water reactors, and cogeneration plants. We believe Congress should support use and research in these areas.

Regarding the diversification of resources, support should be given to solar energy, fusion power, breeder reactors, nuclear power, and coal power.

With regard to this subcommittee and its jurisdiction, we would like to see you include in the Department of Energy funding, support for R&D, and give that the highest priorities. We cannot tell you exactly what to appropriate in each program, but the priority should be such that these rank high in what you do.

Now to further assist in the development of the solar power, we also believe that appropriate fiscal incentive should be given for this emerging——

SOLAR ENERGY R&D

Senator JOHNSTON. What do you mean by solar power?

Mr. CASAZZA. All forms of solar power, from photovoltaic, the fiscal incentives would be helpful as to hot water heating, swimming pool heating, climate conditioning, any of these areas, tax incentives, and R&D to help emerging technologies.

Senator JOHNSTON. What do you think is the future of photovoltaic power?

Mr. CASAZZA. At the present time, there is a problem with the cost. There are some technological breakthroughs needed in terms of getting the cost for the amount of silicon; they will have to get thinner films of silicon. There must be some R&D funding, and enough people do not see a profit situation to be willing to invest the kind of money that should be going into that.

Senator JOHNSTON. But what do you see as the future? Do you see any possible breakthrough?

Mr. CASAZZA. I think breakthroughs are possible. I have not been around long, but this new technology has come along faster than I ever dreamed it would, everything from nuclear power to penicillin and radar, and I think technology breakthroughs are possible. No one can guarantee them, but I think photovoltaic is where money should be going to assist new technology. Again, it has to be through a sound management program, but funding to assist these programs is justified.

Senator JOHNSTON. The reason I ask, we have limited funds and you have heard some of the demands on these funds; we cannot do them all. Would you put photovoltaic high on the list?

Mr. CASAZZA. Not on the top, but it would be near the top.

Senator JOHNSTON. I have not seen the possibility of breakthroughs using silicons.

Mr. CASAZZA. I am not an expert on solar power, but I have some background—there are dental films and things of that type to offer a possibility, and I think the continued looking at these should be done and funded.

Fusion power also—I do not mean to only emphasize solar—but fusion power also has a long-term future potential and accelerated funding is required to maintain the scientific progress. I think the potential of fusion is great and we should continue to fund these.

We recommend also the continued funding of the Clinch River Breeder Reactor, so the needed domestic manufacturing experience can be obtained. I think the key words here are we need to know how to do this in this country, the operating experience, to have our people be able to do that.

As far as innovative resource developments, we see them as a natural complement to our coal and nuclear resources and both of which are needed to meet our future needs.

The rest of the details to back up these statements and amplify them are in my detailed statement, Senator.

I would be happy to answer any other questions you might have Senator.

Senator JOHNSTON. Thank you very much, Mr. Casazza.

[The statement follows:]

STATEMENT OF JOHN A. CASAZZA, ON BEHALF OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Summary

Mr. Chairman, my name is John A. Casazza, and I am appearing before you today on behalf of the Energy Committee of the Institute of Electrical and Electronics Engineers (IEEE), of which I was chairman from 1981-1982. The IEEE is the World's largest engineering society, with over 230,000 members worldwide, 190,000 of whom live and work in the United States.

Through our testimony today, we would like to provide this Committee with our Institute's perspective on the nature of the current U.S. energy problem, and the steps we feel the Federal government should be taking to alleviate this problem. We would like to see actions taken to increase the efficiency of energy use and diversify energy sources. We do not believe that free market forces alone will achieve these results. Government policy and action are needed to assist these forces.

With regard to energy efficiency, if we continue to improve our energy use at the rate that existed over the past 50 years, we will be using 37% more energy in the year 2000 than would be needed if the rate of improvement achieved over the past 10 years is maintained. To achieve this improvement, accelerated investment in energy efficient equipment will be needed. Such equipment includes that required for advanced coal combustion techniques, EHV and DC electric transmission equipment, better burnups of nuclear fuel in our light water reactors, and combined cycle and cogeneration plants. Congress should support use and research in these areas.

With regard to the diversification of resources, support should be given to the development of solar energy, fusion power, breeder reactors, nuclear power, and coal power. With regard to this Subcommittee and its jurisdiction, we would like you to include Department of Energy support for R&D in these technologies amongst your highest priorities. To further assist development of solar power, appropriate fiscal incentives to encourage use should be provided.

Fusion offers such a significant long-term future potential that accelerated funding required to maintain the necessary scientific progress and develop the needed engineering designs should be provided.

The IEEE recommends the continued funding of the Clinch River Breeder Reactor so that the needed domestic manufacturing experience and hands-on operating experience can be obtained.

Development of these innovative energy resources will be a natural compliment to our increasing need to rely on our coal and nuclear resources to provide for our future electrical needs.

The following detailed statement provides additional information to support and amplify these views.

Detailed Remarks

The energy crisis is not over. The fundamental causes are all still present and even increasing; namely world population growth, industrialization of the "third world", and consumption of finite fossil fuel resources at a rate greater then the discovery of new reserves. The question is really when and where will new market shortages occur, and what economic dislocations and political crises will they cause.

Despite the current world oil surplus, the United States continues to import 3 million barrels a day from the Middle East. Though this is significantly reduced from the peak reliance on the Middle East in 1978, it continues to represent a threat to our national economic security. Even with the newly lowered OPEC bench mark price, the U.S. continues to face an oil import bill that approximates $ 30 billion per year at present prices. Worse than the price, this supply continues to thread its way precariously through some of the most remote and geopolitically unstable regions of the world. An oil cutoff from the Middle East would directly impact on our economy. Also, the U.S. continues to maintain treaties with our western allies requiring us to share our oil supplies with them in the event of such an oil cutoff. Because many of our allies are much more dependent on Middle East oil than we are, these indirect effects would significantly increase the impact on our own economy. We urge the Congress to vigorously pursue policies aimed at reducing these risks, primarily by encouraging increases in our energy efficiency, and by diversification of the energy mix that meets the total U.S. demand. This is tantamount to saying that we are unwilling to allow market forces alone to make these choices, because collectively these forces may result in diminished diversity to an extent contrary to the security interests of the country. We firmly believe the government must set policy directions through investments in energy efficiency and alternative energy technologies which will guide market forces to accomplish these objectives in a manner which promotes healthy economic growth.

Increasing Energy Efficiency

One way of measuring a nation's energy efficiency is to measure the number of BTU's required to produce one dollar of Gross National Product. In 1980 the energy efficiency of the United States was about 30,000 BTU/$GNP (in constant 1972 dollars).[1]

Since 1980, the U.S. has experienced about a six quad, or 8% reduction in energy demand (a quad is one quadrillion BTU's). This decline results from a combination of conservation and recession in business activity. Given the energy efficiency of our economy in 1980, the 12.3%[2] drop in industrial sector GNP brought about by the recession resulted in a 5.5 Quad reduction in energy demand. Thus only about .5 Quads of the reduction over this two year period could be attributed to conservation or other efficiency increasing measures.

This conclusion is consistent with the historical trend in U.S. energy efficiency improvements. Figure I indicates that the U.S. has been on a fairly steady declining trend in energy costs for producing GNP, averaging about a 1% improvement in efficiency each year. This trend is mainly the result of the introduction of new technology and the historic shift toward an increasingly large service sector in our economy.

[1] U.S. Statistical Abstract, Bureau of Census

[2] Index of Industrial Production, Federal Reserve Board

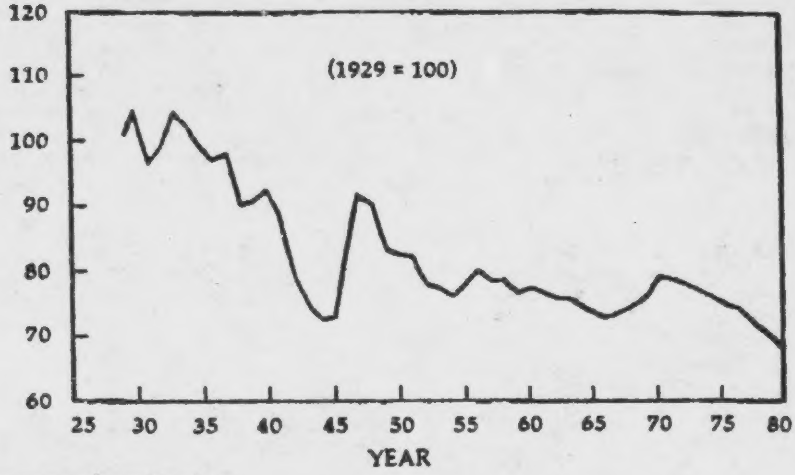
Most analysts agree that in order to allow for healthy economic growth while reducing our oil imports, U.S. energy consumption should reach about 100 quads in the year 2000. The problem is that left only to the historical 1% improvement in energy efficiency each year, U.S. energy consumption in the year 2000, resulting from a real growth in GNP of 4% per year, would reach 137 Quads, 37% above that which we should be targeting to achieve. Clearly, the "Market Forces" which have traditionally been relied upon to improve U.S. energy efficiency is not enough.

In order to contain the overall growth in energy demand, and still allow healthy economic growth, accelerated investment in more energy efficient processes is required. The Congress should examine areas of research opportunities where new, more efficient processes may be found. Examples of such opportunities lie in:

1. Advanced coal combustion techniques (Fluidized Bed Combustion)
2. Extra High Voltage Transmission including High Voltage D.C. Transmission and Switching
3. Higher burn up and/or lower enrichment of Light Water Reactor Fuel
4. High temperature combined cycle plants or cogeneration

In addition, the Congress should examine factors in the Federal laws which might be discouraging industry from adopting already available technologies for energy efficiency. Some of these technologies are power conditioning and speed control for motors, plasma arc smelting for ore reduction, use of microwave

BTU/GDP (1972)



*GDP represents gross domestic product

Source: Work in Progress. Resources for the Future. Washington. D.C., July 1981.

systems for surface treatment and finishing, and industrial-grade heat pumps for recovering waste product heat. We also suggest that the Congress investigate the desirability of reforming depreciation allowances for such equipment, and possibly amending environmental laws to afford an emmissions credit associated with an energy reduction investment.

Finally, we should note that there is now emerging an infant conservation industry targeted toward improving our nation's energy efficiency, with needs that compare with the needs that prevailed in the now-established energy industries in earlier days. Tax credits for oil exploration and depletion allowances, and the efforts of the Atomic Energy Commission to promote nuclear power come immediately to mind. We urge the Federal Government to continue its tradition of supporting new ventures that are critical to our national well-being.

Diversify Energy Sources

In addition to increasing the energy efficiency of our economy, we must work to diversify the sources of energy on which we rely. In addition to the established coal and nuclear fission industries, there are important energy alternatives which can only be relied upon through a program of strong Federal support. It is important to be able to bring these technologies on line as soon as they become economically competitive because the increase in productivity and employment is more rapid when the technology is new, and it thus yields greater return to society than do mature technologies. Federal support for these alternatives is therefore important not only because they will promote diversification of our energy sources, but because their early commercialization will provide opportunities for healthy economic expansion and jobs. Amongst those technologies for which we hope to see full Federal support are the following.

Solar and Other Renewables

The IEEE has studied solar energy as well as other renewable energy technologies. It has become clear that solar and other renewables offer promise for increasing energy independence and improving the environment of the United States on a permanent basis. We can also expect that judicious adoption of the various solar energy technologies will reduce our energy costs, thereby strengthening the nation's economy. Moreover, the United States has the capabilities of producing all of its solar energy products and services without need for imports, and a substantial export market is almost a certainty. For these reasons IEEE is convinced that solar energy will make substantial contributions to the national interest.

Solar energy is another infant industry with needs that compare with the needs that prevailed in the now-established energy industries in earlier days. For this reason, and to obtain the benefits of Solar in a timely manner, IEEE urges significant Federal support, including substantial programs of:

1) Research and development, including system testing, up to proof of commercial feasibility.
2) Favorable regulatory policies.
3) Information dissemination and standards development.
4) Fiscal incentives to the private sector to develop and use the solar resources. These should include tax credits, loan assistance, and selective Federal purchases.

Reasonable execution of such programs calls for relatively modest Federal expenditures. Nevertheless, the drastic cuts in the Solar and Other Renewables budgets, both past and proposed, are not consistent with the timely achievement of the promise of this technology. Also, inflexible restrictions that limit R&D efforts exclusively to long-term research will impede the transition from present first-generation technologies to the more advanced forms that are necessary for maximum cost effectiveness.

Fusion Power

For the budget levels which the Administration is requesting (FY 1984 - $467 million or $2 million below the FY 1983 appropriation), there is little, if any, room to perform meaningful engineering development. It is probably wasteful to pursue engineering of fusion devices without maintaining a strong science data base which explores both mainline and alternate fusion concepts. Pursuing engineering development at the cost of basic fusion science is a little like trying to build a higher pyramid by removing bricks from its base. A narrow base brings the risk of producing an unstable structure. We would not recommend trying to redirect funding from science to engineering. What we would recommend is that in addition to current funding levels to sustain a healthy basic fusion science effort, resources be allocated to begin moving the technology into the engineering development phase. Simply put, the program could very productively use a higher funding level. It is important to remember that since 1977 the magnetic fusion program budget has decreased by nearly 30%, if we measure it in 1977 dollars. This is even more of a loss in buying power for fusion due to its need for state-of-the-art equipment whose costs increase faster than the consumer price index. It is clear that the U.S. Fusion research program could use significant funding increases over those proposed by the Administration.

Breeder Reactor Program

IEEE recommends that an aggressive program on breeder reactor technology be maintained. The IEEE further recommends that the Clinch River Breeder Reactor (CRBR) plant project be continued in order to acquire engineering as well as manufacturing experience and plant component performance data requisite to developing a U.S. Liquid Metal Fast Breeder Reactor (LMFBR) technology.

Contingent upon attaining satisfactory component performance, the plant project should be carried to completion and operated as a precommercial demonstration of an independent and dependable US breeder-based electrical energy supply alternative, utilizing the large, already mined supply of uranium -238.

The earliest dates by which a first commercial breeder will be needed are variously estimated in the period from 2010 to the 2040's. Failure to demonstrate that the technology can be dependably applied commercially, if required, would subject the US economy and security to unnecessary risks. The costs of minimizing these risks are relatively small. A completed demonstration of the technology with the CRBR will provide the minimum assurance that the U.S. has another independent electrical energy supply option, i.e., the use of the domestic stocks of fertile uranium -238 remaining from prior US uranium enrichment. Additional breeder concepts should also be developed for possible demonstration and commercial deployment later in this period.

Conclusion

In conclusion, we believe it is imperative that the United States act with all due haste to increase the energy efficiency of our economy, and to diversify the sources on which we are dependent. We hope that the reduced visibility of our energy problems which has resulted from the current recession and its subsequent temporary oil surplus, does not lull our nation's leaders into a false sense of security. Philosophical debates as to whether the Government or the private sector should take the lead in these efforts are tantamount to arguing who should be first in line on a bucket brigade while the building burns to the ground. This debate has been flourishing since we first suffered from an oil embargo in 1973, and undoubtedly will be continuing in 1993. In 1983, we believe it is the responsibility of the government to ensure that the necessary steps are taken.

NATIONAL ENERGY PROGRAMS

STATEMENT OF DR. BERNARD LEE, PRESIDENT, INSTITUTE OF GAS TECHNOLOGY

Senator JOHNSTON. Next, we have Dr. Bernard Lee, president of the Institute of Gas Technology.

Mr. LEE. Good morning Senator, it is a pleasure to appear before you.

For the record, I am Bernard Lee, president of the Institute of Gas Technology in Chicago. Since my full testimony is for the record, I will highlight some of the comments.

A few words about our thoughts on national energy policy. We feel that the industrial goal for a long term energy policy should make this Nation invulnerable to imports in the world. We feel despite the current disagreement between OPEC members, the cartel will stay and will grow strong again, once the world economy recovers. Therefore, we should not slacken to develop those technologies, and we must continue to ply our resources as well as to make use of energy most efficiently.

To solve these problems, the continuity of support is critical. The private sector could not and should not bear the major responsibility for planning and executing R&D in the areas of the national concern, and that is a national concern.

However, fiscal year 1984 nondefense energy R&D budget is substantially reduced, particularly the nondefense nuclear budget which is less than half of the 1983 level. I am concerned about the R&D and commercialization of new technology. The fiscal year 1983 budget directives stress support for research on up to and including process development unit scale, which again fell short of bridging the gap.

Now, the fiscal year 1984 budget directives further widen the gap by limiting research to only the proof of concept or the bench scale. As a result of omitting such critical links in technology development, we feel the Government will not receive an adequate return on its investment in energy R&D.

For fiscal year 1984, we address four programs within this subcommittee's jurisdiction.

First, in the area of geopressure and geothermal energy. Tests continued under DOE reveal national gas production much greater than expected on the basis of solubility of methane in the reservoir. To better assess the potential of this resource, we strongly recommend $12 million for a continuing production from the existing four geopressure wells to a more accurately determined gas ratio.

Senator JOHNSTON. Do you put the water back in the well?

Mr. LEE. It is reinjected in the companion well for disposal, not the same well.

Our idea is to produce a brine rapidly to get the geopressure level down, and we found in one of the wells in Louisiana, that within 2 weeks of the test, the well came on production and gas that was trapped previously is now released and that was turned into a commercial producer and has been producing for 2 years. So we will take the opportunities there for additional tests.

Senator JOHNSTON. This is the methane dissolved in the water?

Mr. LEE. Dissolved as well as trapped. It is free gas trapped, squeezed in the wells, which would be held by geopressure, and we found by rapid production of the brine, we could release gas in addition to that which is soluable brine.

Senator JOHNSTON. At one time, there was talk about this huge resource in geopressurized brine. Is there that much thought that the resource is a huge one—I forget, about how many thousand cubic feet?

Mr. LEE. That is the famous editorial in the Wall Street Journal, 1,000 years of gas supplies. It is a resource that needs to be much better assessed. We do not consider this to be something that is immediate, but it is a resource that the Nation can ill-afford not to develop. The question of how much gas there is depends not only on the amount of gas dissolved, but how much gas assumed to be trapped in pockets in addition to that which developed.

Senator JOHNSTON. How about the problem of the sand and other abrasive elements on the drill bit?

Mr. LEE. Yes, that is also an area that requires R&D. Because you are very knowledgeable, it is not only abrasive, but it is hot many times, geopressure problems, resources in the brine, and the brine itself is like water. So there are material problems, the drill tool needs to be specially designed, and a good deal of R&D has to be developed, but it is like resources we will need in the long term, they need to be tapped.

Senator JOHNSTON. How deep are these wells?

Mr. LEE. Down 4,000 feet.

Senator JOHNSTON. Is that all?

Mr. LEE. Maybe 5,000 at the most; they do not go 10,000.

Senator JOHNSTON. They are not very deep?

Mr. LEE. Yes.

Senator JOHNSTON. So it does not cost that much to drill.

Mr. LEE. No, but it has to be planned, because you have to have a disposal well on site.

I will be happy to provide additional material for the record if you care.

Senator JOHNSTON. I have seen your statement which has additional material. I would be interested in seeing this.

BIOMASS ENERGY TECHNOLOGY

Mr. LEE. Second, I want to touch on biomass area. We feel the minimum funding for this resource is $20 million, comprising $9 million for biomass conversion to waste conversion, $3 million for biomass harvesting, and $5 million for centers.

Within these categories, IGT recommends $2 million to complete test program on biomass, using existing pressure-raised systems built with DOE funds; $1 million to study first of a kind gas which can gasify woody gas; and $2 million to convert waste to fuel, for sludge, visable sewage sludge, $0.5 million to digest landfill.

In hydrogen, waste energy source which you can apply to energy resources, a long-term energy source, we recommend $3 million for hydrogen research programs to continue and $1 million for hydrogen cycle evaluation.

Finally, in thermal energy storage, this is a great area for recovering high-temperature heat using salt mixtures. We need research to understand the medium materials and the characteristics with respect to operating conditions. We recommend within the fiscal and economical area, $4 million for the continuing development of thermo industry using salt and other materials.

I thank you for this opportunity to appear.

Senator JOHNSTON. On your hydrogen program, where you are working on copper sulfate, is this where you can store the hydrogen in a solid form without the heavy——

Mr. LEE. Right, that is another separate area of research for storing hydrogen, but what we are talking about are various cycles. This is using thermochemical schemes, high temperatures being provided by hydronuclear sources to provide an energy carrier, and that can be stored in the future. So, this is a production scheme we are talking about.

Senator JOHNSTON. Is it practical to use hydrogen as an automobile fuel?

Mr. LEE. Yes, many years ago, 15 years ago at least, a hydrogen vehicle was demonstrated.

Senator JOHNSTON. I know they work, but will it be cost effective?

Mr. LEE. Yes, I think not today, but in the long term, for fossil fuels, I think this is a perfectly viable and limitless national resource.

Senator JOHNSTON. Thank you very much.

[The statement follows:]

STATEMENT OF BERNARD S. LEE, PRESIDENT, INSTITUTE OF GAS TECHNOLOGY

For FY'84, the Institute of Gas Technology recommends:

- $12 million in geopressured gas for continued testing of four existing wells and for participating in brine production to stimulate trapped gas from a previously watered-out well.
- $20 million in biomass for biomass conversion, waste conversion, biomass growth and harvest, and biomass regional centers.
- $3 million for hydrogen research
- $4 million for thermal energy storage using composite molten-salt phase-change materials.

Mr. Chairman and Members of the Subcommittee:

My name is Bernard S. Lee. I am president of the Institute of Gas Technology, a not-for-profit, energy R&D organization in Chicago.

I would like to make some observations of our national attitude toward energy R&D, and, in particular, toward striving for excellence and leadership in energy technology and then maintaining that position. I am deeply disturbed by the absence of a consistent and sustained national policy for energy R&D. This absence causes regular, predictable, and highly disruptive and wasteful oscillations in our technology development effort.

No one asks why we should be preeminent in national defense, because we would never think of importing major portions of our defense technology. Our national commitment to public health and agriculture through well funded and sustained efforts have brought us the best health care system and the most productive agricultural industry in the world. Even though both industries are well established, we continue, as we should, to fully support them at the federal level in order to maintain our position of leadership.

But we seem to be unwilling to strive for a similar leadership position in energy technology. Long-term energy policy should be directed toward controlling energy imports at a level at which the loss of such imports will have a minimal impact on the American economy and our national security. Despite the current OPEC disagreements about pricing and production quotas, the oil cartel will remain and will grow strong again as soon as the world economy recovers. This is no time to slacken our efforts to develop the energy technologies needed for a stable future. The only way to do this is to adopt a national energy policy which stresses the use of indigenous resources, conservation, and more efficient use of energy. To effectively carry out such a policy necessitates making a long-term commitment to energy R&D on a scale large enough to meet the goals.

To make any appreciable progress in solving long-term energy problems, continuity in government support for energy R&D is critical. Our nation has already paid a costly and unnecessary penalty when, as a result of the lack of continuity in Federal energy R&D programs, IGT and other energy R&D organizations were forced to disperse the teams of highly competent scientific and engineering specialists that took years to assemble and train. When the need arises in the future to again develop such teams, as it most certainly will, more years will be lost before the new teams become effective. The discontinuity of Federal energy R&D support is one of the major roadblocks in achieving American preeminence in energy technology.

Energy is an area of national concern. The private sector could not, and should not, shoulder the major responsibility for planning and funding R&D in areas of national concern. The federal R&D budget for FY'84 shows steady support for public health and agriculture, and a huge increase for defense. Non-defense energy R&D is substantially reduced, and, in particular, the non-defense, non-nuclear energy R&D budget is less than half of the FY'83 level, which itself was already minimal.

I am greatly concerned about current government policy regarding research and development and commercialization of new technologies. The FY'83 budget directives stress support for research up to and including process development unit scale, which itself fell short of the desirable goal of providing sufficient data for commercial development of processes by industry. Now the FY'84 budget directives further widen the gap to commercialization by instructing no funding of research activities past proof-of-concept at the bench scale. As a result of omitting such critical links in technology development, the government will be unable to receive an adequate return on its investment in energy R&D of previous years. Federal support must be continuous at a sustained level through the necessary stages of proof-of-concept, process development unit, pilot scale, and demonstration.

The private sector is unlikely to continue the development of a broad array of energy technologies once federal support is interrupted because the private sector can only concentrate on the short term in view of the arbitrary and politicized nature of the world energy arena. The private sector cannot risk its resources to strive for long-term stability when faced with the uncertainties and fluctuations of a world market controlled by different national governments. The only effective and feasible route to long-term U.S. energy stability is for the public and private sectors to work together on a sustained basis. Positive results through sustained federal support are not only evident in public health, agriculture, and aerospace, but also in the energy field — the nuclear industry, solar and photovoltaics, and advanced fossil fuel conversion and utilization techniques. We must recognize that it is in our national interest to adopt a balanced and sustained policy for energy technology development.

For FY'84, specific recommendations for programs within this subcommittee's jurisdiction are highlighted below.

GEOPRESSURED/GEOTHERMAL ENERGY

Some tests conducted under the "Wells of Opportunity" portion of DOE's Geopressured/Geothermal program revealed natural gas production much greater than expected on the basis of solubility of methane in reservoir brine. In addition to the prior tests of the Edna Delcombie No. 1 well, two of the five well tests instrumented by IGT clearly revealed production from natural gas accumulations that would not have been discovered with conventional exploration technologies. One of these, the Lear Koolemay No. 1 well, was still in commercial production two years after the two-week DOE test of the well previously judged to be a "dry hole". The common characteristic of these gas discoveries was brine production sufficient to reduce pressure at the wellbore to near hydrostatic at the depth of the geopressured aquifer.

None of the four "design" wells drilled under the "Geopressured/Geothermal" program have been produced sufficiently to reduce bottomhole pressure to the extent achieved before onset of free gas production from the "Wells of Opportunity". However, each has one or more characteristics that suggests drawdown to hydrostatic pressure may lead to production of much larger volumes of natural gas than previously anticipated. Further, budget limitations have precluded perforation of many of the potentially productive sands as well as the detailed instrumentation and data analysis appropriate to forecasting when high volume gas production will commence.

IGT strongly recommends $12 million funding for continuing production from the existing four wells through FY'84 and that additional and enhanced instrumentation and data interpretation be directed to more accurate determination of the gas-water ratio. Further, we recommend DOE participate in a new well to test brine production for recovery of gas left in place after abandonment of water-drive gas reservoirs. IGT has identified locations where an estimated 4 trillion cubic feet of natural gas was abandoned in place because brine disposal costs could not be recovered at the then prevailing natural gas price.

BIOMASS

The importance of developing biomass technologies needed for our long-term energy supply and to transfer such knowledge to the public requires a minimum funding level of $20 million in FY'84, comprising the following categories:

- o $9 million for biomass conversion
- o $2 million for waste conversion
- o $5 million for biomass growth and harvest, both aquatic and land
- o $4 million for biomass regional centers.

Within these categories, IGT recommends the following specific programs:

Biomass Conversion

To convert biomass into useful energy forms, the two fundamental approaches are thermochemical and biological. IGT has been active in both areas, including combining these two approaches for optimal results.

o The IGT RENUGAS Process Research Unit (PRU) is a pressurized adiabatic fluidized reactor system built with DOE support. It is specifically designed and instrumented to obtain fundamental data for the thermochemical conversion of biomass and wastes to fuel gas or synthesis gas. To derive maximum benefit from this area of research, fundamental kinetics of biomass gasification must be obtained, which will be combined with the RENUGAS PRU test results to establish a basis for reactor design. $2 million is needed to complete this research program and identify trends in gasification characteristics, reactant requirements, and environmental aspects of thermochemical biomass gasification.

o For biomass of high water-content which are not conducive to direct thermochemical conversion, two promising approaches have been identified. One approach involves a two-step biothermal gasification process that first applies biological gasification to the feedstocks which not only produces methane, but also renders the residue suitable for the subsequent thermochemical gasification. IGT has initiated development of this process and further basic and bench-scale research is needed to define the key process parameters. The other approach is wet carbonization which improves both the dewatering characteristics, lowers the oxygen content, and increases the heating value of the feedstock. IGT recommends $2 million in FY84 for conducting the necessary research in these two approaches, using existing PRU-scale equipment.

o IGT has recently developed the first known inoculum which can biologically gasify woody biomass without pretreatment. This discovery should be further evaluated for a variety of woody species to fully establish the potential of this important breakthrough which could significantly advance biological conversion of all woody biomass. IGT recommends $1 million to determine the effects on biodegradability and gas yields of feedstock characteristics, process conditions, and inoculum types at the laboratory and bench scale.

Waste Conversion

Disposal of wastes is a growing problem in all communities throughout the United States. IGT has been developing a two-phase biological digestion process than can be used to recover energy from such wastes while simultaneously stabilizing the residue and rendering it more suitable for disposal.

o In a current laboratory study IGT is testing its two-phase digestion process with municipal sewage sludge. The data to date indicate that over 5-1/2 cubic feet of methane can be produced for every pound of dry organic matter produced. The next logical step is to construct and operate a continuous, adiabatic larger scale process research unit. IGT recommends $1 million to construct and operate an on-site PRU to prove its two-phase digestion process for municipal sewage sludge.

o Two-phase biological digestion can also be used to recover energy from solid waste landfills. IGT's LANFILGAS process uses controlled recirculation of a specially developed bacterial culture to stabilize the_organic waste of a specially developed bacterial culture to stabilize the organic waste within the landfill and to produce methane by two-phase digestion of leached organics in the recirculating culture. Further data are needed at the bench-scale level to study the effects of culture recirculation rate, digester temperatures, and hydraulic and solids retention times in the acid-phase and methane-phase digesters. IGT recommends $0.5 million to carry out bench-scale research on the LANFILGAS process.

Biomass Growth and Harvest

Terrestrial and marine biomass represents renewable energy resources that have the potential for making a significant contribution to our energy base. Growth and harvesting have significant impact on the overall concept of using biomass for energy. Multiple-use species (where a portion of the plant is used for energy and a portion for food), such as sorghum and energy cane, should be studied to optimize their composition and yield. IGT supports a $5 million effort for several research and development projects that would focus on optimizing crop yield and composition through genetic engineering, and on developing improved harvesting methods.

Biomass Regional Centers

We support a $4 million program to establish a number of regional biomass centers which focus on candidate biomass and waste feedstocks for a particular region and which coordinate local research and interest groups, including government, industry, universities, and the general public. The centers would organize seminars, work shops, and conferences, and compile documents for dissemination of information. Since IGT has been in the forefront of all aspects of biomass development, from feedstock growth, harvesting, conversion, to assessment and information dissemination, $1 million for FY'84 is recommended to initiate such a regional biomass center at IGT.

HYDROGEN

A candidate alternative future energy form is hydrogen, which can be made from water by supplying primary energy from solar, fission or fusion sources, and which reverts to water on use. This hydrogen could be transported, stored, and distributed in the existing natural gas systems; it could supply much of society's need for a chemical fuel for heating and transportation; and it could be a basic feedstock for the chemical and petrochemical industry. To make this concept feasible, the need for an improved water-splitting process for producing the hydrogen is critical.

Three very promising hybrid hydrogen cycles that have been proven on a laboratory scale are based on copper sulfate-copper oxide, zinc sulfate-zinc oxide, and cadmium chemistry. However, in order to advance this technology to the demonstration stage, additional fundamental work must be done on the kinetics, product purification, process/energy source interface and engineering optimization of these processes. It is therefore necessary that a sustained basic research support be available for this work. IGT supports a $3 million program in FY'84 for hydrogen research, and specifically recommends $1 million for hybrid hydrogen cycles evaluation.

PHYSICAL AND CHEMICAL ENERGY STORAGE

Thermal Energy Storage

Conventionally, relatively large amounts of energy are stored as fuels in their natural or refined chemical forms. Another promising means of storing energy is to store heat at elevated temperature, or thermal energy storage (TES). This energy can later be used for on-site commercial or industrial applications, partially offsetting the use of gaseous or liquid fuels. One thermochemical method to accomplish TES is the use of melted salts or salt mixtures.

Before widespread application of molten salts TES is possible, a broad-based generic research and development program should be undertaken to investigate the many applications and operating requirements and the many storage media configurations possible. This program would include measurement of the physical and chemical properties of potential media materials, optimization of media thermal and physical behavior within expected operating conditions, media selection and development to fit application temperatures and operating requirements, and materials compatibility studies of media containment, working fluids and auxiliary components.

IGT recommends, within the Physical and Chemical Energy Storage category, $4 million for the development of thermal energy storage using composite molten-salt phase-change materials.

Thank you for the opportunity to present my views. I will be happy to answer your questions.

GAS RESEARCH AND DEVELOPMENT

STATEMENT OF BRUCE STROH FOR MICHAEL BALY, GENERAL MANAGER, AMERICAN GAS ASSOCIATION

Senator JOHNSTON. Next, we have Michael Baly, vice president of the American Gas Association.

Mr. STROH. I am Bruce Stroh, substituting for Mike Baly. I am a manager at the American Gas Association.

I have a statement for the record, but if I may, I would like to briefly summarize the text this morning. On behalf of American Gas Association, I wish to thank the committee for this opportunity to testify.

AGA urges this committee to assure an appropriation of no less than $37 million for gas research and development in the areas of biomass energy systems, geopressure methane zones energy, and LNG safety research.

Also under the jurisdiction of this committee, AGA opposes the proposal of the Federal Energy Regulatory Commission to raise revenue by imposing a system of user fees for regulated companies. We believe that Congress should maintain the responsibility for appropriating all funds necessary for the budget. AGA agrees with the administration that the Federal Government should fund long-term, high-risk R&D which is not undertaken by the private sector alone. We believe the specific projects for which we seek Federal funding qualifies for this support and as such, has a potential for a high supply payoff.

BALANCE FUNDING FOR ENERGY R&D

To move toward a more balanced energy program, we think consideration should be given to the energy sources contribution potential for the Nation's long-term energy supply needs.

However, the administration's fiscal year 1984 budget proposals, if adopted, over 50 percent of funds would be allocated to nuclear research. Yet fossil fuel supplies over 90 percent of the needs but receives only 6.1 percent of the administration's budget proposal.

The recommendations contained in this testimony certainly provide a better balance of R&D funding with respect to LNG and others. Even short-term research takes several years to complete and needs steady support.

There is no question in my mind that gas research programs must be in place now to meet the future supply and demands needs and we should not have to be reactive to energy, price, or budget fluctuations.

The following areas we recommend, long-term, high-risk research—research which requires investment beyond the capability of the private sector. They were not arrived at casually, but rather with the result of careful consideration.

RECOMMEND FUNDING LEVELS

The areas recommended for funding are for biomass, for projects involving biomass conversion, genetic engineering.

The gas from geopressure methane, $12 million, estimate of automatically recoverable and from geopressure zones, vary from 42 to 1,200 trillion cubic feet. AGA recommends continued funding for this activity to tap this potentially vast supply of methane.

For LNG safety research, $5 million.

A national test site for evaluating spills for hazards could provide the information necessary to improve the safety margin of handling such materials and reduce the cost of construction of new plants. There is always possibility that future costs can be offset by charging fees for the use of its facility.

As noted previously, AGA opposes FERC tariff filings. FERC is to benefit the public at large and no special benefit acrues to the regulated entity. Among other things, we believe these fees would serve to discourage cogeneration, something that Congress encouraged and provided for under the program.

It is our hope that this subcommittee will fully fund the FERC at $87 million and not encourage them to protect user fees.

In summary, methane can contribute to our Nation's supply of energy. LNG spill tests can lead to the understanding of the safety precautions needed and the handling of this and other liquid fuels. These considerations and the desire to implement a more balanced energy R&D policy can be met by appropriations in line of this.

AGA opposes allowing FERC for users fees. FERC's activities provide a benefit to the public at large, rather than a special law to the regulated entities, making users fees inappropriate.

For these reasons, AGA recommends Congress retain full oversight authority for FERC's budget through the appropriations process.

That concludes my statement and I am happy to answer any questions.

Senator JOHNSTON. Thank you very much. We appreciate your testimony.

[The statement follows:]

STATEMENT OF MICHAEL BALY III, VICE PRESIDENT, GOVERNMENT RELATIONS, OF THE AMERICAN GAS ASSOCIATION

Mr. Chairman and Members of the Subcommittee:

On behalf of the American Gas Association, I thank the Committee for this opportunity to testify. A.G.A. is composed of nearly 300 natural gas distribution and transmission companies serving over 160 million consumers in all 50 states.

A.G.A. urges this Committee to assure an appropriation of no less than $37 million for gas-related research and development in FY 1984 in the areas of biomass energy systems, geopressured methane zones, and LNG safety research. On a matter also under the jurisdiction of this Committee, A.G.A. opposes the proposal of the Federal Energy Regulatory Commission to raise revenue by imposing a system of user fees for regulated companies. We believe that Congress should maintain its oversight responsibility by appropriating all funds necessary for the FERC budget.

SUPPLY BENEFITS OF GAS-RELATED R&D

A.G.A. agrees with the Administration that the federal government should fund long-term, high risk R&D which cannot be undertaken effectively by the private sector alone. We believe that the specific projects for which we seek support qualify as such and have the potential for very high supply payoffs.

Technological advancements which increase gas supplies will generally benefit consumers, who can call on these increased supplies for a fuel with the highly desirable characteristics of environmental acceptability, convenience, and efficiency.

The Administration's FY 1984 budget proposals, if adopted, would devote a high proportion of funds to nuclear energy, which, unlike gas, will provide a low proportion of primary energy consumed in the U.S. in the foreseeable future. Even though nuclear power consumption is quite low compared to other fuels, the Department of Energy budget proposal allocates over 50% of the R&D funds to this area. Fossil fuel supplies over 90% of U.S. primary energy use but receives only 6.1% of the R&D funds in the Administration's budget proposal. The recommendations contained in this testimony provide a better balance of R&D funding with respect to biomass, geopressured methane, and LNG safety research.

RECOMMENDED GAS-RELATED RESEARCH PROJECTS

A. Biomass: $20 million

Refined techniques for the conversion to methane of marine, terrestrial and waste biomass may yield enormous supply payoffs since biomass represents an inexhaustible, renewable energy source. However, to capitalize fully on this potential source of energy, conversion technologies must attain the efficiency necessary to compete with alternate sources of energy.

A.G.A. recommends $9 million in appropriations for biomass conversion projects. One of these, a reactor system built with Department of Energy support, can obtain data about fundamental kinetics of biomass gasification in the thermochemical conversion process. This research program is not complete, though, and requires further funding. Another project renders high-water content biomass suitable for direct thermochemical conversion, a process which cannot presently be performed. Also, biological gasification of woody biomass without pretreatment has been identified as a promising process. More complete evaluation will establish the potential for this breakthrough.

A funding level of $5 million for genetic engineering in biomass growth and harvest will aid several projects to maximize crop yield and composition and improve harvesting methods.

We recommend $4 million in appropriations for the establishment of biomass regional centers, which would organize and coordinate scientific research activities. This would enhance and focus the body of knowledge necessary to advance biomass conversion efforts.

Funding of $2 million for waste conversion technology will make research possible on the conversion to methane of municipal sewage sludge and materials from solid waste landfills. Certain techniques will focus on recovering energy from these wastes while rendering the residue more suitable for disposal.

B. Gas from Geopressured Methane: $12 million

Geopressured zones along the northern Gulf of Mexico coastal region are sedimentary formations 200-300 miles wide and up to 50,000 feet thick. Water trapped within these formations is believed to contain significant quantities of dissolved methane; estimates of ultimately recoverable resources from these formations vary from 42 to 1200 trillion cubic feet (Tcf).

A.G.A. recommends R&D funding for this resource in order to tap the potentially vast supply of methane contained in the geopressured zones. To do this, continued support of the technical activities on existing DOE design wells must be forthcoming.

Further research via the existing wells would reveal more accurate determination of gas/water ratios through enhanced instrumentation and data interpretation. It would also aid in developing materials capable of withstanding high pressures and corrosive elements encountered in drilling for this gas. Moreover, continued testing of these wells would help to clarify productivity characteristics, such as the economic rate of fluid deliverability. Finally, better methods of brine disposal would unlock significant amounts of methane which have been abandoned because they are trapped in brine. At current levels of technology, the disposal of brine is too costly to produce methane trapped therein.

C. LNG Test Facility: $5 million

A national test-site for evaluating spills of various hazardous materials could provide the information necessary to improve the safety margin of handling such materials and reduce the cost of construction of new plants.

A.G.A. has been informed that $3 million in federal funds from the FY 1983 budget are available for construction of the facility. Further, we are told that funds from the DOE operating budget are available for data correlation at the facility. We believe that a total of $5 million for both construction and data correlation will meet these needs at the facility and that, if full funding cannot be expended during FY 1983 the difference should be made up in the FY 1984 R&D budget.

It is possible that some or all of future operating and maintenance costs could be recovered through the use of user fees. This would make federal appropriations a one-time expense.

USER FEES

As noted previously, A.G.A. opposes FERC's proposal to raise revenue by imposing user fees for various tariff filings.

FERC may charge user fees under the authority of the Independent Offices Appropriations Act of 1952 and Bureau of the Budget Circular A-25 which interprets that Act. The Act requires, however, that (1) the service be defined as narrowly as possible; (2) the beneficiary of the service be defined with similar specificity; (3) the fee must be justifiable and (4) the service must confer a special benefit on the user.

Our regulated natural gas companies oppose FERC user fees. The authority to collect and retain user fees which are cost based do not serve as an incentive for efficient operations nor as positive regulatory reform. Increases in operating costs are flowed through to the regulated entities.

FERC's mission is to benefit the public at large and no special benefit accrues to the regulated entity in particular. A quick look at the first few sections of the Natural Gas Act serve as evidence. Orders to import and export natural gas must be consistent with the public interest. Rates must be just and reasonable. New, enlarged or abandoned facilities must have a certificate of public convenience and necessity. Similarly, curtailment priorities set out in the NGPA protect the general public first and foremost. Overall it is difficult to discern the special benefit provided to an interstate pipeline which must be proven for FERC to assess these fees by law.

User fees may, also, serve to discourage energy conservation. In Docket No. RM82-38, the FERC has proposed fees applicable to electric utilities, Cogenerators and Small Power Producers. These fees, we believe, would serve to discourage cogeneration--something that Congress encouraged and provided incentives for in PURPA. Cogeneration does not confer a special benefit on the applicant but, rather, results in total energy savings shared by all citizens.

It is our hope that this subcommittee will fully fund the FERC at $87 million and not encourage the FERC to collect unproductive user fees.

The rules for filing are designed primarily for the benefit of the public rather than the applicant. Indeed, FERC's mission under the Natural Gas Act is consumer protection, and all the Commission's regulations and proceedings arise from that premise. Therefore, tariff filings do not meet the special benefit criterion necessary for FERC to impose user fees.

The user fee proposal, by funding FERC activities through the fees, also reduces Congressional oversight capabilities. Through the appropriations process, Congress currently directs and restricts the activities of FERC according to the level of funds appropriated for particular activities. Without this oversight, Congress will exert less influence in guiding FERC activities in the fashion it deems appropriate.

CONCLUSION

Methane from biomass and gas from geopressured methane can contribute significant resources to our national supply of energy. An LNG spill test facility can contribute advanced safety precautions to the handling of this fuel and hazardous materials. These considerations and the wisdom of implementing a balanced energy R&D policy can be met by providing appropriations in line with the recommendations made by A.G.A.

A.G.A. opposes allowing FERC to impose user fees on regulated natural gas companies. The proposal to do so would not represent positive regulatory reform and would diminish Congressional oversight authority. Moreover, FERC's activities provide a benefit to the public at large, rather than a special benefit to the regulated entities, making user fees an inappropriate revenue raising measure for FERC. For these reasons, A.G.A. recommends that Congress retain full oversight authority for FERC's budget through the appropriations process.

INERTIAL CONFINEMENT FUSION PROGRAM

STATEMENT OF DR. ALEXANDER J. GLASS, PRESIDENT, KMS FUSION, INC.

Senator JOHNSTON. Next, we have Dr. Alexander Glass, president of KMS Fusion Inc.

Mr. GLASS. I appreciate the opportunity to appear here today. For the record I am Alexander Glass, president of KMS Fusion in Ann Arbor, Mich.

We are one of the six labs in the United States funded by the Department of Energy for development of inertial fusion. This program has been supported by the Department of Energy and its predecessor agencies for over a decade. I think, speaking for the entire program, we would like to express our appreciation to the Department and this committee for their continuing support.

Inertial fusion involves concentrating energy on a tiny capsule which contains the fuel, the hydrogen. The fuel is heated by this process to the point which conditions for thermal nuclear reactions are obtained. The neutrons are then captured and used to generate electricity for fuels or to provide processed heat.

This is the long-term application of inertial fusion because of the parallel process using inertial fusion and the processes of the hydrogen bomb, also other applications for the national defense.

The next milestone for the fusion program is the demonstration of ignition, that is the point at which at least in some part of the fuel the energy release is comparable to the energy invested to bring the fuel to thermonuclear fission. There are two facilities under construction in the United States today. One in the Livermore, operational in 1985; the other accelerator in Albuquerque, operational in 1987.

These facilities, along with other sources of information within the program, will provide the basis for the program decision regarding the direction of the fusion program in the late 1980's.

DUPLICATION OF INERTIAL CONFINEMENT RESEARCH

Senator JOHNSTON. Dr. Glass, tell me why we have so many labs doing inertial confinement research.

Mr. GLASS. Well, there are three primary approaches under consideration, one each at the national labs. Livermore, Los Alamos, and Sandia, with particle beams.

There are three supporting labs—our own, the lab in Rochester, and the Naval Research Lab. Our role is to provide supporting information and, in our own case, fusion targets support for the major facilities. The program in every review that has been carried out has been determined that it is probably premature to attempt, at this juncture, to eliminate any of the three main line technological approaches which would be, of course, one way of reducing the number of participants. We are exploring a variety of alternatives——

Senator JOHNSTON. Three main inertial confinement programs?

Mr. GLASS. Yes, so there is no duplication among the labs. In fact, I will try to convince you that there are many things we are not doing that we ought to do.

Senator JOHNSTON. Well, we are spending a lot of money on fusion of all kinds as you know, and do all three of these technologies have defense applications, differing defense applications?

Mr. GLASS. They all have the same in the sense that in order to obtain—the defense applications are twofold: One is just improved understanding of nuclear physics and experience carried on in the skills. The other is the use of X-rays and particles emissions from exploding targets.

Both of these objectives will be served by any technology to bring about ignition. So——

Senator JOHNSTON. When do you expect ignition?

Mr. GLASS. The facility at NOVA in 1982, and PETRA in 1987 or 1988. So, we are looking for data on the requirements of ignition if not an actual demonstration.

Senator JOHNSTON. That is at Livermore?

Mr. GLASS. NOVA is at Livermore.

FUNDING REQUIREMENTS

We have supported the timely construction of these facilities because we feel that it is important that we obtain, on a timely basis, this information regarding ignition and get on with seeing where this program is going. We are concerned that this administration budget request will reduce the program effort below the efforts at which effective use can be made of these facilities. The administration request would reduce the operating expense program from $140 million to $117 million, and this is the wrong time to reduce the budget level here.

Furthermore, the reduction is unnecessary because completion of these major programs—Nova is now completed—that completion has reduced the overall expenditures substantially. From 1982 to 1983, the overall budget was reduced $10 million, and the administration wants to further reduce it this year of $40 million.

Now, as a minimum, we urge you to sustain the program and not reduce it. Furthermore, as I have detailed in my written testimony, we are proposing expansion of our own activity, we feel they are cost-effective actions to take. Our role is to provide experimental base and technology for the construction of those targets.

Over the past 4 years, with the support of this committee, we have supported these efforts. We feel we have a highly cost-effective productive facility ideally suited for the physics data needed to make the best use of NOVA when it comes on line. Last year we did 600 target shots.

In my written statement I have provided a detailed proposal as to how we would propose to advance and accelerate the milestone program. We feel a modest increase in the funding level is appropriate. It is increased productivity and it is a cost-effective use of major facilities scheduled to begin operation in the next few years.

Thank you very much.

Senator JOHNSTON. Thank you, Dr. Glass.

This is a most important technology and I would like to get back out there and look at this program again. As I say, I saw the NOVA program at Livermore and I want to go into that in more depth.

I think some time soon we will have to get more focus in our various fusion programs, not only in inertial confinement, but in the magnetic fusion program as well.

Mr. GLASS. Well, we hope you will come and we can show you our showroom in Ann Arbor too.

[The statement follows:]

STATEMENT OF DR. ALEXANDER J. GLASS, PRESIDENT, KMS FUSION, INC.

Summary

The Administration budget request for 1984 calls for a significant reduction in the operating funds appropriated for the Inertial Confinement Fusion program in the Department of Energy. We urge the Subcommittee, first of all, to sustain the operating budget level of the Inertial Fusion Program. We feel that further reductions in the budget will be counterproductive. Furthermore, we request an increase in operating funds for KMS Fusion to allow us to expand and accelerate our activities in support of the main-line objectives of the national program, especially the demonstration of near-ignition target performance. The modest increase requested in the operating budget of the ICF program will not result in an overall budget increase, due to the scheduled completion of major construction projects. We feel that an increased investment in the Inertial Fusion program at this time will yield high dividends immediately, in increased productivity, and will provide the basis for more cost-effective and timely use of the major facilities scheduled to begin operation in the next few years.

Testimony

Fusion is the process which fuels the sun and the stars, and gives the hydrogen bomb its awesome power. For forty years, scientists have strived to harness this source of energy, and reduce it to a controlled, terrestrial scale. To do so would ensure a perpetual supply of safe, clean, abundant, and affordable energy.

At the present time, we are on the threshold of the demonstration of the scientific feasibility of controlled fusion, by several technical means, in laboratories in the U.S., Europe, the U.S.S.R., and Japan. There are two primary approaches to fusion, magnetic fusion and inertial or laser fusion. In each approach, the fuel, consisting of deuterium and tritium (the heavy isotopes of hydrogen) is contained and heated to a temperature greater than the temperature inside the sun. At this temperature, the hydrogen nuclei collide and stick together, fusing to form the helium nuclei, and releasing energetic neutrons. These neutrons are captured, and their energy converted to heat to drive a power plant. In magnetic fusion, the fuel, in the form of a low pressure gas, is insulated from the surrounding container by powerful magnetic fields. In inertial fusion, the fuel is held in a tiny capsule, less than a millimeter in diameter, and is heated and compressed by bombarding its surface with the energy of a powerful laser or particle beam. At sufficiently high density, the energy released in the center of the fuel mass is redeposited in the surrounding cold material, and a propagating thermonuclear burn wave is created, which leads to the rapid and efficient release of energy from the fusion reaction. The threshold for this process is the point at which the center of the fuel mass is heated and compressed sufficiently to yield a net release of energy in excess of that invested in the fuel to heat it. This point is called ignition.

The energy potential of fusion is very great. The basic fuel for fusion, heavy hydrogen, occurs naturally in water. If used as fusion fuel, one millimeter of water from the surface of Lake Michigan would supply the electrical energy used by the entire United States for one hundred years. While the ultimate application of fusion energy is the generation of electricity, the neutrons produced by fusion can also be used to transmute the world's abundant thorium resources into fissionable uranium, to create synthetic fossil fuels by neutron radiolysis, or to supply process heat.

The full energy potential of fusion will not be realized until the next century. However, in addition to its energy potential, the inertial confinement fusion (ICF) program also provides near-term benefits to the nuclear weapons program. From its inception, the inertial fusion program has been supported both for its military applications, in the near term, and for its long-term energy applications. The military applications of ICF derive from the similarity between the compression of the fuel container by the energy of a laser or particle beam, and the compression of the thermonuclear secondary, in a hydrogen bomb, by x-rays from the fission primary. ICF provides a laboratory-scale phenomenon which exhibits much of the same physics as thermonuclear weapons. Additionally, the radiation, x-rays and neutrons, produced by an ICF target, can be used to simulate the effects of nuclear weapons on defensive systems, supplementing the data currently obtained only through underground testing, but on a smaller scale, and at a lower cost.

The Congress of the United States has supported the development of inertial confinement fusion, for the twofold purpose of military and energy applications, since early in the 1970's. At present, ICF research in the U.S. is concentrated in six laboratories. These include three DOE laboratories, the Lawrence Livermore National Laboratory (LLNL), the Los Alamos National (LANL) and the Sandia National Laboratory in Albuquerque (SNLA), along with the Laboratory for Laser Energetics (LLE) at the University of Rochester, and the U.S. Naval Research Laboratory (NRL), and KMS Fusion. Of these, KMS Fusion is the only private participant. In 1983, funding for the ICF program totaled $190 Million, including $140 Million for operations, $11 Million for capital equipment, and $39 Million for major construction projects.

The major construction projects consist of large facilities at each of the three DOE laboratories. The objective of these facilities is to define the requirements for target ignition in the 1986-88 period. This is seen as the critical time period for decision in the ICF program. Each of the large facilities embodies a different driver technology. At LLNL, Nova, a large glass laser, will become operational in 1985. At LANL, a large carbon dioxide laser, Antares, will commence operation in 1984. PBFA-II, a light-ion beam accelerator, at SNLA, will be complete in 1986. Both Nova and PBFA II are expected to drive targets to near-ignition conditions. Results from these facilities, along with data garnered from other sources within the ICF program, will enable a choice of driver technology to be made late in this decade, for the next phase of the program.

KMS Fusion has played a major role in the development of inertial fusion. The company began fusion research in 1971. In 1974, the world's first successful demonstration of laser-produced thermonuclear reactions took place at KMS Fusion's laboratory, in Ann Arbor, Michigan. Since then, the company has contributed many other "firsts" to the program. KMS Fusion was the first to carry out experiments with short wavelength light, a technique which has been subsequently adopted world-wide. The company is the only laboratory, to date, to carry out experiments with frozen (cryogenic) fuel, a technique generally acknowledged to lead to improved target performance. In 1981, KMS Fusion demonstrated that cryogenic targets perform better than gas-filled targets. Most recently, in 1983, the company developed a unique optical probe for visualizing the evolution of material above the surface of a target, a multi-frame holographic interferometer, capable of providing stop-motion images in a fifty-billionth of a second, with several images being recorded during each experiment, which lasts less than a billionth of a second.

The company is one of the major suppliers of targets and target components within the ICF program. The target fabrication effort comprises roughly half of the company's activities. This effort supports the internal research program at KMS Fusion, and also produces target materials and components for all the other participants in the program. Several European laboratories also buy the sub-millimeter-sized glass Microshell® fuel containers that KMS Fusion has developed for fusion use. In addition to target fabrication, the company is pursuing long-term research to develop the large targets needed for the critical experiments to be performed on Nova. These targets involve several techniques and technologies developed at KMS Fusion, including cryogenic fuel, polymer shells, and thick-walled glass fuel containers.

In addition to the company's efforts in materials science and target fabrication, KMS Fusion operates a highly productive experimental facility, the Chroma laser. Chroma is a two-beam laser, capable of producing up to 800 Joules of infrared light in a pulse of one billionth of a second duration. This energy can be efficiently converted to visible light, which couples more effectively to the fusion target. The laser is equipped with a pulse stacker, which allows us to synthesize pulses of arbitrary temporal shape, an important parameter for optimal target compression.

The Chroma laser is outfitted with two experimental areas. This allows us to carry out one set of experiments, while setting up another experimental configuration. At present, one experimental area is devoted to a unique optical system, devised and patented by KMS Fusion, which enables us to illuminate a target uniformly from all directions, with the light from the two beams of Chroma. Either gas-filled or cryogenic targets can be imploded in this target chamber, with either infrared or visible light. The second experimental area is used to explore the physics of so-called "hohlraum" targets. The primary approach to driving inertial fusion targets consists of converting the incident energy, from a laser or particle beam, into x-rays, and driving the fusion target with the x-rays. The x-rays are contained in a cavity called a "hohlraum". Details of this approach are classified, because of the similarity to the technology of fusion weapons. KMS Fusion is the only laboratory in the U.S. today equipped to explore both directly driven and x-ray driven laser fusion targets.

During the past year, KMS Fusion carried out over six hundred target shots. Since 1980, the company has placed heavy emphasis on improving and developing its capability to detect and measure the complicated phenomena which occur within a fusion target. In any given experiment, it is necessary to measure effects on a spatial scale of hundredths of a millimeter, and a time scale of hundred-billionths of a second. The quantities measured include the density of the rapidly moving material vaporized by the incident laser energy, electrons, neutrons and ions, and x-rays of a wide range of energies. Today KMS Fusion has acquired the capability to measure all these quantities, simultaneously, with high accuracy. In developing our diagnostic capabilities, we have worked closely with the other laboratories in the program, especially LLNL, and gratefully acknowledge their cooperation and support.

By virtue of this increased diagnostic capability, and the flexibility and high data rate of the Chroma laser facility, KMS Fusion has become the principal source of information concerning the basic physics of hohlraum targets in the ICF program. These experiments directly support the large-scale implosion experiments scheduled to be performed on the Novette and Nova lasers at LLNL. A high degree of technical cooperation exists between the scientific staffs of the two laboratories, and the experimental results obtained at KMS Fusion are readily and quickly shared with the LLNL scientists, as well as throughout the program. Both in target fabrication and in our experimental program, we are attempting to make the most cost-effective use of our facilities to support the near-term objective of the national program, the achievement of near-ignition conditions on the Nova laser, late in this decade.

1984 is a critical year in the ICF program. If we are to make effective and timely use of the $176 Million Nova facility, when it begins to operate late in 1985, we must be ready with suitable target designs which can be tested at that time. To get to that point, we must lay the basis of physical understanding of the complex phenomena which occur within hohlraum targets, and develop the appropriate technology to enable us to fabricate these targets. In its role as a support laboratory within the ICF program, KMS Fusion has placed primary emphasis on the achievement of these goals.

The level of operating funds for the ICF program was reduced to a level of $122 Million in 1982, from a 1981 level of $140 Million. The program impact was severe. For example, KMS Fusion suffered a staff reduction in excess of ten percent, resulting in the loss of several critical skills. In 1983, operating funds in the program were restored to the 1981 dollar level, but without provision for two years' inflation. The administration is proposing to reduce the operating budget for ICF to $127 Million in 1984, an effective reduction of 14%, even though the completion of the Nova construction project will greatly reduce the overall budget of the program.

We at KMS Fusion fully understand and support the desire at all levels of government to reduce expenditures. We further appreciate that administration spokesmen are unable to call for budget growth, or, as in the case of the ICF program, to oppose drastic reduction, even when they perceive the need for expanded activity. We feel that it is in the best interests of the ICF program, and the nation, to urge the Congress not to reduce the operating funds within the ICF program, but even to increase them. We reiterate that this can be accomplished in the framework of an overall budget decrease in the program, due to the completion of major construction projects. We are advocating this course of action, because we feel that a small additional investment now will produce high leverage in forthcoming years. With a cumulative investment in the program of over one billion dollars, and the effective use of a $176 Million facility at stake, further reductions in the operating budget in 1984 clearly represent a false economy.

In 1983, KMS Fusion received $10.5 Million in operating funds, approximately 7.5% of the program total. We are requesting an increase in funding for 1984, to the level of $14.5 Million. We feel that this expansion of our program will enable us to make far more effective use of our facilities and staff in support of the objectives of the national program, and will contribute substantively to making more cost-effective use of the large facilities in the DOE laboratories, as they come on line later in the decade.

With added funding, we will increase our efforts in the development of critical target fabrication technologies. Particular emphasis will be placed on the development of polymeric materials for large fuel containers. These materials need to be strong, capable of holding fuel, and physically uniform. We need to accelerate the development of diagnostic gas fills for targets, which provide characteristic signals from within the target to measure the conditions of temperature and pressure achieved in the implosion. Given our long experience in cryogenics, we feel it is urgent to accelerate the development of large cryogenic targets, along with techniques for charaterizing the condition of the frozen fuel within the target.

We cannot carry out the necessary expansion of these activities by reducing other efforts in target fabrication. We must continue to support the ongoing experimental programs in our own and other laboratories, because these are the source of the vital physics data needed to design high-performance targets. With added funding, we shall accelerate our own experimental program, with first priority given to maintaining a full schedule of experiments on hohlraum targets. Here we need to expand our capability to analyze the experimental data we are generating. Both added staff and equipment are needed. Furthermore, we need to accelerate the investigation of directly-driven targets. KMS Fusion has a unique capability to carry out these experiments. Direct-drive targets may provide the best way to obtain data on ignition requirements and high density implosions, at limited laser energy. These experiments benefit from the ease of diagnostic access, and allow the early development and test of cryogenic targets, as our recent experiments have shown. Direct-drive experiments also provide an excellent test bed for physical measurements, since the geometry of these experiments is essentially one-dimensional. During 1982, for example, we carried out measurements on the flow of energy into fusion targets, using directly driven targets, with informative, and in some cases, surprising results. Further investigation of these transport phenomena is required for a full understanding of target performance.

On a parallel basis, we must accelerate the development of several required technologies. For direct-drive studies, the development of broad-bandwidth drivers, pioneered by KMS Fusion, has been identified by DOE as a high-priority need. We must continue the development of diagnostic instrumentation, since our understanding of critical physics issues is entirely limited by our ability to observe and measure what occurs inside the imploding target. Finally, we must accelerate the identification of cost-effective driver technology, if the ICF program is to be ready for the programmatic decision point scheduled for the 1987-88 time frame.

In summary, we feel that any reduction of operating funds in the ICF program is a false economy, and is unnecessary, due to the scheduled completion of major construction projects. We are requesting a modest increase in the ICF operating budget, to enable us to expand and accelerate our activities in support of the major objectives of the national program. We feel that such an investment will yield high dividends immediately in increased productivity, and will provide the basis for more cost-effective and timely use of the major facilities scheduled to begin operation in the next few years.

PREPARED STATEMENT

Senator JOHNSTON. Before I call the next witness, I want to include in the record the prepared statement submitted by the National Association of State Universities and Land-Grant Colleges which addresses funding for the solar, conservation, and renewable energy programs at DOE.

[The statement follows:]

STATEMENT OF ALVIN F. HILDEBRANDT, UNIVERSITY OF HOUSTON, ON BEHALF OF THE NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND-GRANT COLLEGES

Senator Hatfield and Members of the Committee, it is a privilege and a pleasure to join with the National Association of State Universities and Land Grant Colleges to submit a university view to you. Universities have viewed with alarm the dramatic reductions in energy research and development program budgets proposed to you for fiscal 1984. In the crucial areas of fossil energy, conservation, solar and other renewables proposed budget reductions total more than $600 million. The Department of Energy R&D past authority and the 1984 Administration proposed budget are shown in the following:

Department of Energy - R&D

	Budget Authority		
	1982	1983	1984
Conservation	444	410	101
Fossil	567	311	138
Solar and Other Renewables	343	253	102

These are areas that are among the most crucial to the future energy needs of the country and are also the most critical with respect to requirements for advanced training of energy experts needed by industry, government and universities. Development in these areas can have a very positive employment effect, both locally and nationally. The magnitude of the reductions--more than 60 percent--are particularly devastating to the continuity of research development and educational programs.

The characteristics of these forms of energy vary greatly from state to state and region to region. Fossil energy varies with respect to both the characteristics of coal and other fossil energy forms but more importantly has different impacts upon the environment depending upon where the conversion system is located and which conversion process is used. The same coal burned in the same power plant in one part of the country must be handled differently than in another part of the country because the wind and environmental conditions vary by substantial amounts. The state and regional differences are even more pronounced with respect to conservation, solar and other renewable energy systems. Conservation in the north primarily relates to cutting heat losses in the winter time in buildings. In the south it is primarily related to loss of cooling and air conditioning costs. Universities are a particularly valuable resource in the United States for adapting general research to specific state and regional needs. The proposed reductions in the budget in these areas are especially detrimental to the future of university research and to the relationships of these universities to the industry and culture in the locations where they operate. Unlike fusion energy which is much the same in Florida as it is in Maine, fossil and renewable energy systems vary enormously by location and use. Furthermore, both short-range and long-range energy impacts are undoubtedly more significant from fossil and renewable energies. The technical challenges are great especially if one considers the diversity of needs. Just because the research needs are different from state to state and region to region does not mean that they are not sophisticated, important, and qualify as long-term high-risk research. The very fact that they are locally oriented makes them higher than normal risk because research output is not generally applicable nationwide to the same size and uniformity of market. Thus, recovering research expense is more difficult and challenging. The very complexity of regional needs means that federal support for research and development in these areas is more important, not less important. Energy savings anywhere in the U.S. means more net energy for the nation. And we recommend to you that these enormous and devastating budget cuts be reconsidered and reversed. In fact, instead of budget cuts, these are among the most promising areas for future success in serving the energy needs of the United States and we encourage you to consider expanding research and development programs rather than the proposed reductions.

Renewable energy systems already provide for this country twice as much energy as does nuclear energy and are growing at a much faster rate. We would further point out that renewable energy systems frequently supply the low grade thermal energy needed by industry and in our homes in ways that are more efficient and of lower cost than with the complexities of nuclear electric power generation. We would also point out that the demand for electric power in this country is declining primarily because of the success of energy conservation and improvements in energy efficiency. Continued improvements in energy efficiency will focus energy needs of the future on low grade areas of renewable energy and coal generation to the extent that big centralized, inefficient energy systems will be in less demand.

The last few years have dramatically illustrated that the character of energy mix in this country is dramatically changing away from oil and nuclear energy to distributed coal, co-generation, and renewable energy systems. The technical complexities of distributed systems are at least as great as those centralized systems and need research. The dramatic current growth is not because of lack of complexity but is because of greater economic viability. There is not a lack of need for federal support of research and development in these energy areas, in fact the need is most acute. The primary difference is that long-range high-risk energy research and development activities in coal, energy conservation, solar and other renewables will have more rapid technology transfer, widespread utilization and more economic development stimulus on the local level. Many of these energies systems are more labor intensive, thus they will contribute immediately and in the long range to a reduction in unemployment, particularly among less well-trained workers.

We urge you to reconsider national priorities in energy research and development and move programs and funding into universities where federal money will be multiplied by state and regional resources and where the powerful and important byproduct of greatly increased manpower development will contribute now and in the future to the country's energy independence and achievement. For each dollar of energy research and development placed in a university, about twenty-five cents is used to support students who contribute to the needs of the country for the next forty or more years after their training. In contrast, for every dollar placed in a national lab less than one cent supports students who contribute to the future energy manpower needs of the country. University energy research and development is not only lower cost and more efficient it contributes the important additional element of enhancing and enlarging human resource achievements. Also, universities can readily transfer technology directly into industry through joint research programs.

Energy research and development in the United States today is primarily planned as a top down process. This results from the legacy of the atomic energy committee where a few people make crucial decisions and these decisions were implemented by the bureaucracy with little evaluation or interpretation. Changing times, especially for non-nuclear areas, now indicate that we should have an energy research and development program that is more bottoms up. This means that local and regional needs should be organized and formulated and coordinated at the national level so that energy research and development programs serve the whole country in an intimate network that has the support and understanding of all the people. A model of the past is agricultural experiment stations. We urge you to abandon the old and now outmoded system of top down planning of energy research and development and move to a new system that involves a greater understanding and input from all states and all levels in our society. We are sure that any such approach will indicate that a dramatic shift of resources into programs that support conservation, coal, energy utilization and the development and utilization of renewable energy systems will be the primary focus both now and in the next century when these systems will contribute most to the future energy needs of this country.

I thank you for the opportunity to submit this testimony.

STATEMENT OF ANTONINE LAFATA SOTTILE, DOCTOR OF ENGINEERING

Senator JOHNSTON. Now, our next witness will be Dr. Antonine Sottille, doctor of engineering

Mr. SOTTILE. Good morning, Senator.

This is the fourth time I am applying on behalf of my projects, to appropriate $0.25 millions.

The first time I stressed the technological impact of the projects. They are based on the seven immortal principles to solve forever problems of energy and economy; so by passing of time, their importance increases. In fact, they are not like dumb computers of today, to be made obsolete by smart computers of tomorrow, and those to be made obsolete by smarter computers beyond tomorrow. Countries neglecting the immortal principles will face disaster in the next century.

The second time I stressed the environmental impact of the projects, urging the curbing of current extermination of fossil fuels and poisoning of atmosphere, land, sea, and oceans, in order to save the habitability of our planet.

The third time I stressed the economical impact of the projects: They generate work opportunities, which, being new, don't compete and don't damage existing works. They assure also profits for 1,000 years and provide effective means to curb crises deriving from unemployment, inflation, recession, face to otiose ordinary financial palliatives. I quoted the European countries, which having neglected these elementary rules are changing rank to attain the underdeveloped category.

Today, I am stressing the monetary role of the projects: By saving from destruction fossil fuels, these, together with other natural resources, would be available in the future as monetary guaranty of the dollar, face to the declining gold standard's weight. Natural resources' standard displacing the obsolescent gold standard.

See my statement of May 16, 1980, to the Senate Committee on Appropriations, on helium gas, where I assumed the possibility of helium standard more appreciated than gold one next century.

In the past, thousands of alchemists, during thousand years, experimented to transmute into gold, elements like lead, antimony, et cetera, by means of the so-called philosophers' stones: These being not radioactive, experiments terminated negatively.

Present alchemists have various means to transmute elements into gold 79. protons and 118. neutrons in its nucleus: Fission of elements with atomic number above 79.; for example lead (82. protons) by laser; fusion of elements with atomic number below 79., together with appropriate number of alpha particles (helium 4. = 2. neutrons) and either capture of extra neutrons or emission of neutrons.

For example, fusion of antimony (51. protons and 70. neutrons) together with 14. alpha particles and capture of 20. extra neutrons, would yield pure gold.

To notice last year successful experiment to generate the new element 109. (to be called unniloctium from Latin roots of the number 109.) by firing in a heavy-ion accelerator IRON-26. into a target of Bismuth-83. (26. + 83. = 109).

To notice current experiment to generate a new element 116., by firing calcium–20. into a target of curium–96. (20. + 96. = 116.).

Element 116. should lie within the stability's valley, a cluster of superheavy elements between numbers 114. and 126. which might be long-lived until billions of years.

In the same way, for example, by firing nickel–28. into a target of antimony–51. (28. + 51. + 79.); also gold–79 might be generated.

Thank you.

Senator BURDICK [presiding]. Thank you very much.

[The statement follows:]

STATEMENT OF ANTONINE LAFATA SOTTILE, DOCTOR OF ENGINEERING

Honorable Congress of The U.S.A.
SENATE Appropriations Committee
Energy and Water Development
SubCommittee Washington,DC.20510.

Ref :
SENATE Record part 4. Fiscal Year 1983.
My Statement with my petition to
APPROPRIATE $. 25. Millions, in order
to advance the application of my PROJECTS,
in the interest of our NATION.
Introduction again of the above TABLED
petition for consideration in F.Y. 1984.

GENTLEPERSONS
****

By introducing again my petition to APPROPRIATE $. 25. Millions for F.Y. 1984. Appropriations, I stress the urgency to advance the application of my projects, in order to assure to our NATION enormous benefits and leadership, next years, next Century, and I pray You to allow me to testify on the issues, during current HEARINGS.

The referenced Statement of mine , with its Title: "Five patentable Concepts stressed in my Projects" details about them :

-The 4th. Concept's propositions about Electro-magnetic suspension-propulsion, lower to 1/10. requirements of POWER and of conducting COPPER windings or ALUMINUM sheets. In conventional almost horizontal tracks, 2. Trains flying at 800. Km./Hour, will require about 500. Megawatts, My propositions lower them to 50. Megawatts.

-The 5th. Concept's propositions devise to improve the adverse environments of Planet VENUS and of Planet MARS, in a lapse of 50. years, while other propositions require a lapse of 1000. years, advocating genetic Engineering.

The required amount of $. 25. Millions (which was defined as approaching the size of a QUARK, a sub-component of Atoms, when confronted to the huge allotments appropriated to questionable purposes), will be utilized in the 2. succeeding initiatives :

-First Initiative: By NASA to shuttle in Earth's synchronous Orbit an experimental Solar Mirror Concentrator, and try to reach at Ground level an efficiency of Photovoltaic and Thermal Panels= = 20.KWH./square meter x Day, exploiting : permanent, almost night-and-day, insolation - cogeneration of heat - stronger insolation than average, for example in the range of Equatorial insolation - etc.
As detailed in my Projects, 120. Solar Mirrors Concentrators, settled in synchronous Orbit, each one illuminating 10. square Km. of Panel surface, at the quoted efficiency, would generate 8.76 T. KWH./year (T. =Tera =Trillion) =87.6 Quads, an amount above the total energy of every kind, used yearly in the U.S.A., in recent years.

-2nd Initiative:To build a Wagon EUREKA, electric vehicle prototype my claimed invention.
In successive downgrades and upgrades it will assure positive and negative FREE accelerations, while, because of its body permanent levelness, Passengers will appreciate alike feelings as in ordinary elevators, and no damage will occur to Cargoes.
To the propositions of others, affirming the need "To reinvent the Car", I answer : "The Car was reinvented in 1974, by my invention Wagon EUREKA". Rather it is necessary "To reinvent Tracks and Roads" and transfer to them the historical automotrice function, until now privilege of Cars. Moderne Highways have changed not too much from Roman time Via Aurelia, Via Latina, Via Salaria : only horse-Powers have replaced horse-Animals. The Public Works required to modify Tracks' and Roads' gradients and courses will result highly appropriate to curb unemployment, inflation, recession, face to inefficient ordinary financial palliatives. This kind of works, being provided by new Initiatives, will not result competitive and will not damage existing Initiatives. Through Wagon EUREKA, 4/5 of energy savings in Transports, and PROFITS for thousand years will be reached.

Washington, DC.- March 24. 1983.

Honorable Chairman and Members of Committee

This is the 4th. time I am applying on behalf of my projects, to appropriate $. 25.Millions.

- The first time I stressed the TECHNOLOGICAL impact of the projects: They are based on the 7. Immortal principles to solve forever problems of energy and economy; so by passing of time, their importance increases.
In fact they are not like:"Dumb Computers of today, to be made obsolete by smart Computers of tomorrow, and these ones to be made obsolete by smarter Computers of after-tomorrow". Countries, neglecting the Immortal principles, will face disaster, next Century.

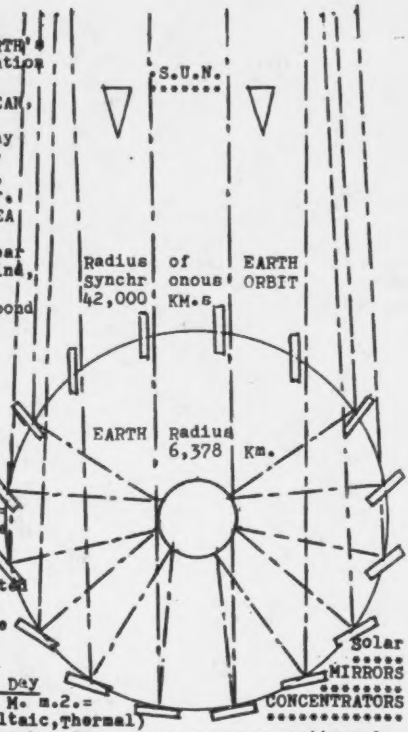
- The second time I stressed the ENVIRONMENTAL impact of the projects, urging to curb current extermination of FOSSIL FUELS, and poisoning of Atmosphere, Land, Sea Oceans, in order to save the habitability of our planet.

- The third time I stressed the ECONOMICAL impact of the projects: They generate WORKS' opportunities, which, being new, don't compete and don't damage existing WORKS. They assure also profits for thousand years, and provide effective means to curb crises deriving from unemployment, inflation, recession, face to otiose ordinary financial palliatives.
I quoted the European Countries, which having neglected these elementary rules are changing rank to attain the under-developed category.

- This time I am stressing the MONETARY role of the projects: by saving from destruction FOSSIL FUELS, these ones together with other Natural resources, would be available in the Future, as MONETARY GUARANTY of the DOLLAR, face to the declining GOLD STANDARD's weight. NATURAL RESOURCES' STANDARD displacing the obsolescent Gold Standard.

see my statement of May 16. 1980 to the SENATE Committee on Appropriations, on HELIUM GAS' behalf, where I assumed the possibility of Helium standard more appreciated than Gold one next Century.
In the past, thousands of ALCHEMISTS, during thousand years, experimented to transmute into GOLD, Elements like Lead, Antimony, etc. by means of the so-called PHILOSOPHERS' STONES: these ones being not radioactive , experiments terminated negatively.

present ALCHEMISTS have various means to transmute Elements into Gold (79. protons and 118. Neutrons in its Nucleus):
- FISSION of Elements with Atomic number above 79., for example Lead (82. protons) by LASER -
- FUSION of Elements with Atomic number below 79., together with appropriate number of ALPHA particles (Helium 4. = 2.protons and 2.Neutrons) and either capture of extra Neutrons or emission of Neutrons.
For example Fusion of ANTIMONY (51.protons and 70.Neutrons) together with 14. ALPHA Particles and capture of 20. extra Neutrons, would yield pure GOLD.
- To notice last year successful experiment to generate the new Element 109.
by firing in a HEAVY-ION Accelerator IRON-26. into a target of BISMUTH-83. (26.+83. =109)-
To notice current experiment to generate a new Element 116., by firing CALCIUM-20. into a target of CURIUM-96. (20. +96.=116.)
Element 116. should lie within the STABILITY's Valley, a cluster of superheavy Elements between numbers 114. and 126. which might be long-LIVED until billions of years.
In the same way for example, by firing NICKEL-28. into a target of ANTIMONY-51. (28. +51. =79.) also GOLD-79. might be generated.


S.U.N.
Radius of Synchronous EARTH ORBIT 42,000 KM.s
EARTH Radius 6,378 Km.
Solar MIRRORS CONCENTRATORS

SOLAR MIRRORS CONCENTRATORS settled in EARTH's SYNCHRONOUS Orbit would assure SUN's radiation almost night-and-day on selected AREAS of EARTH surface, and provide UNLIMITED, CLEAN, near FREE Electric Energy.
PHOTOVOLTAICS' Efficiency = 5.KWh./m.^{2}x Day would result multiplied to 20. " ./". x " assuming exploitation of COGENERATED HEAT.
120. Solar Mirrors Concentrators in Synchr. Orbit, each one illuminating a 10. Km.^{2}AREA of Ground surface, at 20.KWh./m.^{2} x Day efficiency, would generate 8.76 T. KWh./Year that is above the total Energy of every kind, used last year in the U.S.A. -
8.76 Tera KWh. (T.= Tera =Trillion)correspond in Obsolete Terms to 87.6 QUADS -
140. Solar Mirrors in identical assumed settlement would generate 10.T.KWh./Year and Up, that is about the total Energy of every kind supposed to be used around year 2000. in the U.S.A.

One Million K.watt Solar Plant (1.M.KW.) by average INSOLATION =1.KW./sq.meter (1.KW./m.2.= below average Insolation in the U.S.A.), would require 1.Million m.2.= = 1.Km.square of photovoltaics to generate 5.M. KWh./Day, complying with Department of Energy's GOALS of 5.KWh./m.2. x Day, accounting with: exploitation of cogenerated Heat - solar panels pointed to South, and inclined by an angle equal to the Latitude of the site - eventual concentrators, mechanisms to track the SUN, etc. -
The multiplied efficiency = 20.KWh./m.2.x Day assumed in my PROJECTS would require 1./4 M. m.2.= =1./4 Km. square of Solar panels (photovoltaic,Thermal) to generate 5. M. KWh./Day, as above, through a lower PEAK power capacity Solar plant = 1./4 Million K.Watt, accounting with:
Exploitation of cogeneration - permanent insolation during almost 24.Hour./Day - - Stronger insolation than average at ground level, (by example: in the range of Equatorial insolation) provided by MIRRORS CONCENTRATORS in SYNCHRONOUS ORBIT.

DEPARTMENT OF ENERGY

TABLE 2 SOLAR ELECTRIC GOALS

TECHNOLOGY	DEMONSTRATED CAPITAL INVESTMENT (\$/kWe)*	IMPROVEMENT FACTORS	CONDITIONS
SOLAR THERMAL	1300	X8-12	Year 1985 5kWh/m^2/day
PHOTOVOLTAIC	1100	X30-50	Year 1990 5 kWh/m^2/day

Year 1975 to Year 1982 STATEMENTS by Mr. Antonine Lafata Gottile
to the CONGRESS of The U.S.A.

Ph. Doctor of Engineering
P.O. Box 28292
Washington, DC 20005-0292

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(10) SENATE Committee on APPROPRIATIONS Fiscal Year 1983 - Hearings on Energy and Water Development - Record part 4. pp. 2711 to 2717 - April 24. 1982 statement on :
- Five patentable Concepts stressed in my Projects - 120 Solar MIRRORS Concentrators settled in Earth's synchronous Orbit, to generate at ground level 8.76 T.KWh./year (T.=Tera =Trillion), corresponding to 87.6 Quads : amount above the total Energy of every kind used yearly by The U.S.A., in recent years. The intervention of Army Corps of ENGINEERS, five POWER Administrations, Tennessee Valley Authority, etc. would save a decade of lost time, waiting for private initiatives only--
- petition to change the Department of Energy into Department of SOLAR ENERGY, in order to avoid its dismantling -

(9) HOUSE Committee on APPROPRIATIONS F.Y. 1983 - Hearings on Energy & Water Development Record part 8. pp. 2586 to 2593 - April 1. 1982 statement as the above one to SENATE.

(8) SENATE Committee on APPROPRIATIONS F.Y. 1982 - Hearings on Energy & Water Development
NATIONAL ENERGY INDEPENDENCE
Record part 3. pp. 1932 to 1943 - March 24.1981 Statement on :- Seven Immortal principles to solve forever problems of Energy and Economy : 1) Solar energy ; 2) Electrification ; 3) Electro-magnetic suspension-propulsion ; 4) Savings of energy ; 5) Tunneling generalization ; 6) Gradients' utilization ; 7) Wagon EUREKA, electric vehicle, expansion - Solar Mirrors in synchronous Orbit -
- A.L.S. =Air, Land, Sea, Zero=fuel Transportation Immortal Plan -
- Twin Dirigibles = LTA. (Lighter Than Air craft) - Plan 3-phase of Transports' electrification - Planets VENUS and MARS conditioned in a 50-year lapse -
- ATLAS Interchange replacing ordinary clover-leaf Interchange and assuring Urban and Highways uninterrupted Traffic - Resumé, Inventions, publications, booklets, etc.

(7) HOUSE Committee on APPROPRIATIONS F.Y. 1982 - Hearings on Energy & Water Development Record part 10.pp. 2402 to 2411 March 1981 statement as the above one to SENATE -

(6) SENATE Committee on APPROPRIATIONS F.Y. 1981- Hearings on Department of Interior - Record part 3. pp. 953 to 957 - May 16. 1980. Statement on HELIUM uses and storage : Helium=gas' and Sun=Helios' Civilization beginning next Century with Helium-STANDARD to be appreciated in a Higher degree than GOLD-STANDARD -

(5) SENATE Committee on APPROPRIATIONS F.Y.1981. Hearings on Transportation - Record part 2. Pp. 144 to 150 April 17.1980 See above # 8.

(4) HOUSE Committee on APPROPRIATIONS F.Y.1981. Hearings on Transportation - Record part 7. pp. 615 to 619 April 16.1980 See above # 8.

(3) SENATE Committee on APPROPRIATIONS F.Y.1981 Hearings on Agriculture - Record part 3. Pp. 513 514 515 - April 2.1980 Statement on: Useful industrial products by harvested plants

(2) SENATE Committee on Commerce, Science & Transport Oct. 7 & 10 1975. Hrgs. on S. 1632 & H.R. 8800 Electric Vehicle R.D.&.D. Act of 1975 pp. 161 to pp. 164 Record 94-96- LEANWAY = A Leaning Subway Leanway's MOTTO:"To build & to operate 2. Subways like the Washington Metro-rail, by the BUDGET of only one -To move 5. Subways by the ENERGY of only one"-

(1) HOUSE Committee on Science & Technology -June 3. to 6. 1975 Hrgs. on H.R. 5470 El. Veh. R.D.&D. Act of 1975 pp. 728 to 740 Wagon EUREKA electric Vehicl Record 27.- MY INVENTION assuring savings of Energy in Transportation in the range of 4/5. Wagon EUREKA keeps its body at permanent levelness, while its underframe, engaged in successive downgrades and upgrades, provides FREE ACCELERATIONS.

SENATE & HOUSE RECORDS

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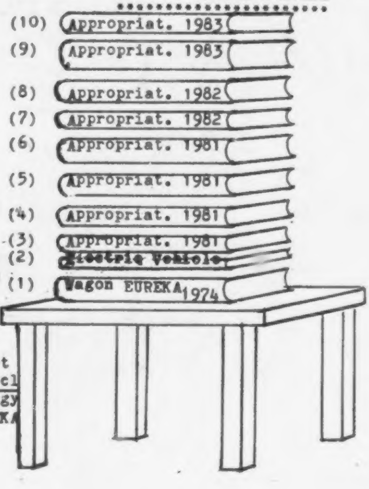

WAGON EUREKA - ELECTRIC VEHICLE -

WAGON EUREKA
******* ********
ELECTRIC VEHICLE
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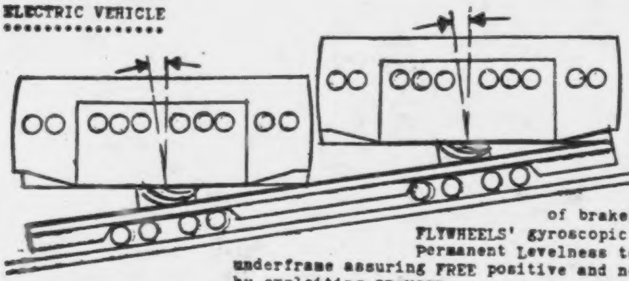
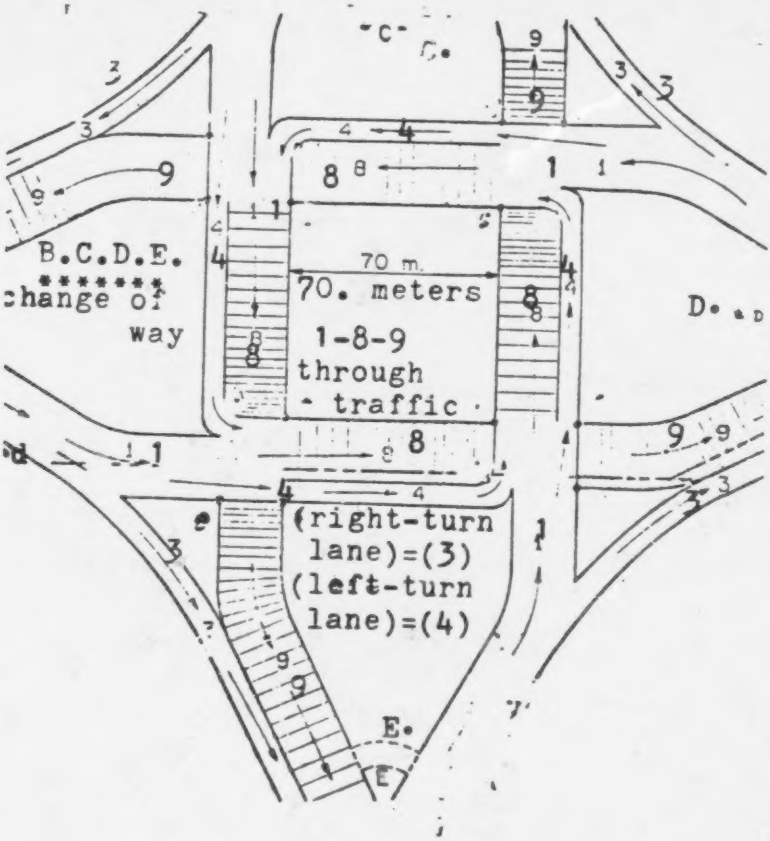


Economy of energy in transportation = 4/5
The required 1/5 supplied by Sun, Wind, Hydro, Tide etc.

Light composite material FLYWHEEL as accumulators and recuperators of brakes' energy

FLYWHEELS' gyroscopic effect to assure Permanent Levelness to the body, with underframe assuring FREE positive and negative acceleratio by exploiting GRAVITY.

ATLAS INTERCHANGE: compact, with at-level, -
***** ************ short right-turn & left-turn lanes, replacing ordinary clover-leaf interchange and assuring Urban & Highways uninterrupted traffic


C. C.
9
9
3
3
3 3
4 4
9
9
8 8
1 1
1
B.C.D.E.
****
change of
way
4
4
70 m.
70. meters
1-8-9
through
traffic
8
8
8
4
D. D
9 9
3
3
1
8 8
4 4
(right-turn
lane)=(3)
(left-turn
lane)=(4)
3
9
9
1
E.
E

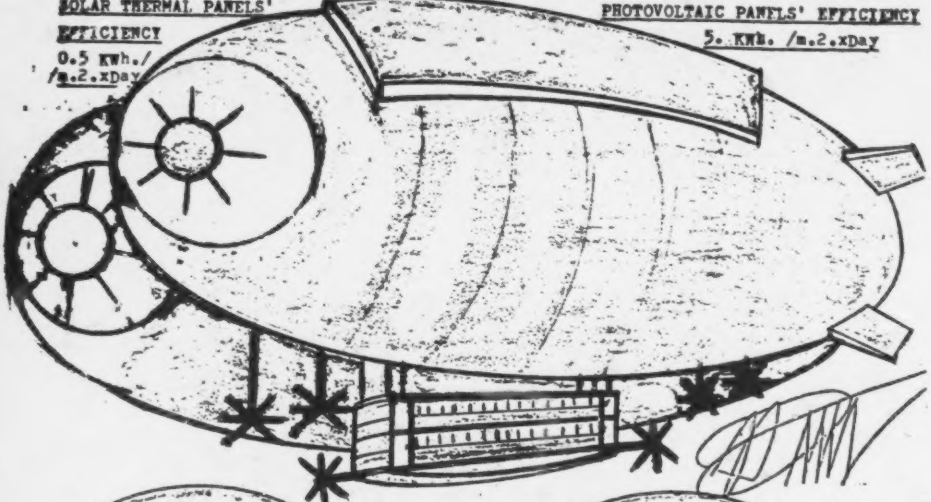
TWIN DIRIGIBLES - LTA =Lighter-Than-Air Craft

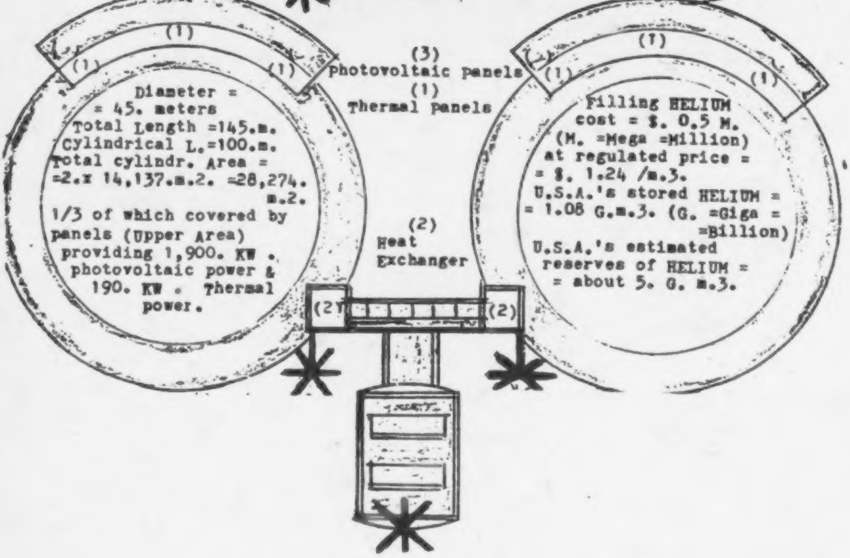
TWIN DIRIGIBLE s volume = 414,000. m.3.- HELIUM lifting power = 377. metric Tons - Unlimited Range - Speed = 200 Km./hour - capacity : over 400 passengers - lifting power increased by Electric ROTORS powered by:
1,900. KW. photovoltaic panels (3) - 190. KW. Solar THERMAL panels (1) -
FLYWHEELS of light composite material, as accumulators of energy and STABILIZERS -

Advanced project, claimed as INVENTION of mine : TWIN DIRIGIBLE s top to be changed into huge THERMO panels (1), by close double envelopes, under photovoltaic panels(3) HELIUM, enclosed in the interstitial cavity (1), severed from bulk of other Helium and heated by Sun radiation filtering through panel (3), as well as by heat emitted from these photovoltaics (3), to provide so called Thermal Electricity.
THERMO-COUPLE principle, as applied in certain Space-craft, would provide the easier way to extract Electricity from Thermo panels (1)
Otherwise, hot Helium (1) to be RECYCLED to heat Exchanger (2) and here to heat other easily condensable GAS, this one to propel a Turbo-generator of Electricity

SOLAR THERMAL PANELS' EFFICIENCY
0.5 KWh./ /m.2.xDay

PHOTOVOLTAIC PANELS' EFFICIENCY
5. KWh. /m.2.xDay





Diameter =
= 45. meters
Total Length =145.m.
Cylindrical L.=100.m.
Total cylindr. Area =
=2.x 14,137.m.2. =28,274.
m.2.
1/3 of which covered by
panels (Upper Area)
providing 1,900. KW .
photovoltaic power &
190. KW . Thermal
power.

Filling HELIUM
cost = $. 0.5 M.
(M. =Mega =Million)
at regulated price =
= $. 1.24 /m.3.
U.S.A.'s stored HELIUM =
= 1.08 G.m.3. (G. =Giga =
=Billion)
U.S.A.'s estimated
reserves of HELIUM =
= about 5. G. m.3.

Mr. Antonine Lafata Sottile
ph. Doctor of Engineering
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Projects, studies, articles and booklets :
Air Land Sea Zero-fuel Transportation
Immortal Plan (year 1979 English)
Project ARCHIMEDES (year 1977 English)
Plan 3-phase of Transports' Electrification
(year 1975 Engl

Project of Leanway (a leaning subway) (English) 1974.
Project of "Automatic Spiral Lifter" (escalator) (English) 1970.
44 articles published on "Laser Beam" (Spanish) 1970.
Booklet on "Laredo City-planning and Economical Resources" (English) 1970.
Booklet on "The Laser and its Utilization" (Spanish) 1969.
Project of "Urban Traffic without Signal Controls" (Spanish and English) 1968.
Project of "Alternal Leaning Subway" (Spanish and English) 1966–68.
Technical books translated from English and French into Spanish (Spanish) 1967.
Compendium of "Public Works in the Paris Region" (French) 1964.
Booklet on "Electrical Installations in a Nitrogen Factory" (Italian) 1943.

RESUME'
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February 21, 1971 to present in Washington, D.C. area—Researching on Subway and other fields.

1970 in Laredo, Tex.—Divising a new system of mechanical spiral escalator.

1968–1970 in Mexico City U.N.A.M. University.—Researching and lecturing on Laser beam.

1967 in Mexico City Secretary of Public Works.—Devising a new system of urban traffic, without signal controls.

1965–1966 in Santiago, Chile Ministry of Public Works.—Devising a new system of subway.

1958–1965 in Paris, France Ministry of Public Works.—Statistics and planning of public works in the Paris region.

1954–1957 in North Africa Public Works.—Construction of roads in Algeria and Morocco.

7 years in a company synthesizing ammonic by-products in Italy.—Chief of Electrical and Electrolysis Departments, Manager of factories, Vice-director in the Rome general direction.

INVENTIONS
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Twin-Dirigibles (LTA.=Lighter-Than-Air craft)
- year 1980 -

New kind of Subway car: Wagon "Eureka", 1974.
New system of automatic spiral lifter, 1970.
Laser beam devices to detect fire, gases, earthquakes, etc., 1969.
New system of urban traffic without signal controls, 1968.
New system of metropolitan subway, 1965.

Foreign languages

French, Spanish, Italian (Excellent) Speak, read, write, understand.
German (Fair) Speak, read, write, understand.

High level knowledge

Mathematics, Physics, Laser, Electrotechnics, Subway, Roads, etc.

STATEMENT OF RONALD GUTIERREZ, REPRESENTING THE COUNCIL OF ENERGY RESOURCE TRIBES, AND MEMBER, BUSINESS COUNCIL OF THE SPOKANE INDIAN TRIBE OF WASHINGTON STATE

Senator BURDICK. Our next witness will be Mr. Ronald Gutierrez, Council of Energy Resource Tribes.

Mr. GUTTIERREZ. Good morning, Mr. Chairman, my name is Ron Gutierrez, I am a member of the Business Council of the Spokane Indian Tribe of Washington State, and it is an honor for me to be here this morning to make a case for your continued support of the Council of Energy Resource Tribes.

As you may already know, Mr. Chairman, the council, or CERT, as we are called, is a coalition of American Indian tribes which own substantial oil, natural gas, coal, and uranium resources. This year will be CERT's eighth year in existence; during this time the number of our member tribes has nearly doubled, from 22 tribes to 37, and today substantially more than one-half the country's American Indian reservation population belongs to our member tribes.

We formed CERT, Mr. Chairman, to assist us in managing our energy resources in a prudent manner, according to our own tribal values and priorities. I firmly believe that the professional staff CERT has assembled, here in Washington and in Denver, makes the organization one of the finest technical assistance organizations to be found anywhere in the country, in fact, in the world.

Literally hundreds of projects have been performed at the request of our tribes, projects which have led to the signing of agreements and increased production in some cases; others which have enabled us to better cope with the environmental and social impacts of energy resource development; and still others which have helped us place energy resource development within the proper context of overall, self-sustaining tribal economic development.

I would like at this time to submit for the record a sampling of selected CERT technical assistance projects which not only demonstrates the range of the organization's capabilities, but shows what impact those projects have had upon individual tribes and the energy production picture across the country as a whole.

I am here today not just to represent the CERT executive committee, but as a spokesman for my tribe, the Spokane. So allow me to take a minute to make a personal observation regarding the meaning CERT has for my people. On the Spokane Reservation we have the Midnight Mine, the largest open-pit uranium mine in the Northwest. For many years we suspected that the operation of the mine was contaminating our surface and groundwater, but had no means of conducting a proper water quality impact study.

CERT did this study for us and identified corrective measures to be incorporated into an eventual reclamation plan; more importantly, Spokane tribal leaders are today aware of potential water quality problems associated with uranium development on our reservation, and now know how to go about mitigating those problems. Our increased sophistication has led to an ability to entertain other proposed energy projects, and I am confident that increased energy production will ultimately result, for which we have the CERT organization to thank.

FEDERAL SUPPORT

Since its inception, the Council of Energy Resource Tribes has received funding support from the Energy Department and the Interior Department, and it has been this interagency funding support which has enabled it to grow into the organization I am describing today. In each of fiscal years 1981 and 1982, combined CERT support from these two agencies came to $2.2 million. In fiscal year 1983, the level of support decreased dramatically; although the precise levels are not yet final, we expect that DOI-DOE combined support will be in the $1.15 to $1.35 million range, a drop of more than 40 percent over an extremely short timeframe. We are down to the bone today, and any further cuts would gravely endanger our ability to keep the quality of staff which has provided outstanding technical assistance to us in the past.

In my opinion, the administration's fiscal year 1984 budget recommendations would, if enacted as proposed, spell the end of the Council of Energy Resource Tribes. I say this, not to be an alarmist, but to put the truth out on the table: The administration's Interior Department request seeks only $250,000 for CERT, one-third of last year's funding, and the Energy Department's funding for CERT is zeroed out entirely.

These budget proposals fly directly in the face of the President's own stated determination to have the Federal trustee aggressively help the tribes pursue self-sustaining economic development and self-sufficiency, through the prudent tapping of our natural resources. I suspect there are those within this administration and elsewhere who believe that members of the energy-owning tribes are wealthy and could support the CERT organization themselves tomorrow, if need be.

The Spokane Tribe is one such energy tribe. The average per capita income on my reservation is presently about $5,400, and the current unemployment rate among able-bodied male and female tribal members is between 75 and 80 percent. I would be hard-pressed to try to convince those people that they are wealthy Indians. The nationwide economic slowdown has hit Indian people harder than perhaps any other segment of our citizenry, and the energy resource tribes are no exception.

Today, I ask you not to abandon the faith and respect which you have shown the CERT organization in the past. I ask you to examine this listing of projects now in the record, and I hope you will agree that the Energy Department's investment in CERT is among the most cost-effective investments ever made in the energy security of our Nation. There will come a day when our tribes will no longer stand dependent upon Federal assistance, either in the form of support for CERT or in the form of direct payments for the essential services which keep us alive. I think that will be a day we should work to see together, and it will come hand-in-hand with increased energy production on Indian lands, something of potential great benefit to our great country as a whole.

Thank you. I would be happy to answer your questions.

Senator BURDICK. Do I understand that CERT is financed from both DOE and also from the Department of the Interior?

Mr. GUTIERREZ. Yes, sir.

Senator BURDICK. And I don't think these figures are final, are they, the Interior figures are not finalized yet?

Mr. GUTIERREZ. They are not cast in cement, sir, but the recommendation of the Interior Department is $250,000, and—as I stated before—it is a 40-percent decrease, and we need the $1 million.

Senator BURDICK. Are you talking about the 1984 budget now?

Mr. SWIMMER. The Department of the Interior's budget for CERT for fiscal year 1984 is $250,000. The Department of the Interior will provide during the current fiscal year, $750,000. The $250,000 represents a $500,000 reduction this year and next year. I believe we were getting a little over a million from the Department of Energy the year before, so we are reduced to $750,000 now, that is $250,000 I believe they tend to zero us out the following fiscal year.

Senator BURDICK. As you know, the committee supported this program in the past, and we will look at it very carefully.

Mr. GUTIERREZ. One final request. I would like you to review our provisions, our sheets that we have supplied the committee of projects that CERT has taken on from member tribes and the results, and what it has done for energy production.

Senator BURDICK. Very well.

Mr. GUTIERREZ. Thank you, Mr. Chairman.

Senator BURDICK. Thank you, both of you.

[The information follows:]

SELECTED TECHNICAL ASSISTANCE PROJECTS PERFORMED BY THE COUNCIL OF ENERGY RESOURCE TRIBES--MARCH 1983

PROJECT DESCRIPTION	PRIOR TO CERT INVOLVEMENT	AFTER CERT INVOLVEMENT
Navajo - Four Corners Pipeline Right-of-way Grant for: a. a 262-mile 12" pipeline b. the line carries approximately 45,000 b/d crude from California to Texas.	The original offer of the company was $400,000 for a 20-year grant.	The settlement was for between $78 to $92 million over 20 years for a 20-year renewal period. Moreover, the company offered a scholarship fund of 40,000/year for 20 years. The company will offer business and employment opportunities to the tribal members.
Fort Berthold Three Affiliated Tribes - CENEX pipeline right-of-way grant for: a. a 6.9-mile "pipeline" b. the line carries approximately 8,000 b/d of refined products.	the original offer of the company was $2,000 for a 20-year grant.	The settlement was for $286,000 in 1982 up-front for a 20-year renewal period. The company will also offer business and employment opportunities to the tribal members.
Laguna-Transwestern pipeline right-of-way grant for: a. a 34-mile 30-"pipeline: b. the line carries gas approximately 700,000 MCF/d	The original offer of the company was $191,000 for a 20-year period.	The settlement was for $1,500,000.00 in 1982 upfront for a 20-year renewal grant. The company has also accepted to give the tribe access to a landing strip if possible. The tribe will be afforded employment and business opportunities.
Navajo - TX & NM pipeline right-of-way grant for: a. a 69-mile, 12" pipeline b. the line carries crude to Texas	The offer was to make an unspecified amount on a rod-basis for a 20-year period	The settlement was for $1,720,000 in 1983 prices over 20 years for a 20-year renewal period. The company will offer, if possible, employment and business opportunities to the tribal members.
Laguna - New Mexico Gas Company right-of-way grant for: a. a 9-mile 12" pipeline b. the line carries gas of approximately 48,000 MCF/d to local residents.	The original offer was for $7,400 for a 20-year period.	The settlement was for $237,000 in 1982 prices up-front for a 20-year period with one option to renew 20 years hence. Employment opportunities are to be provided for the tribal members.
Southern Ute Indian Tribe - AMOCO gas development lease for: a. 64,000 acres of develop-ment b. for at least 10 wells with a minimum of 300 MCF/d.	The original offer was in a lb 2/3 percent royalty rate.	The company accepted to pay: a. $6,000,000 up-front in line of bonus; b. $1,000,000 each year guaranteed income for three years; c. A minimum royalty of 20 percent in the initial year rising every year one percentage point to a 25 percent royalty. d. At this stage the tribe had the right to convert its share to a joint venture after the pay-out period.

PROJECT DESCRIPTION	PRIOR TO CERT INVOLVEMENT	AFTER CERT INVOLVEMENT
Navajo - Tennessee Valley Authority (TVA) uranium service contract in the crownpoint area for: a. An in-situ operation	No action was taken	TVA accepted to guarantee an $82 million loan for the operation. a. in return to have a guaranteed supply of uranium by virtue of a fair supply agreement with the tribe. b. The price would be set according to long-term market trends; c. TVA would work as an operator of the project; d. the gross cash flow of the project was estimated $590,000.00 over a 20-year period. e. The tribal net cash flow would be $195,000,000.00 in that period. f. The tribe has postponed the decision to accept the offer for political reasons.
Blackfeet Oil and Gas Lease CERT assisted in conducting the first tribally-managed oil and gas lease sale by developing strategies based on current geophysical data.	Oral auctions conducted with minimal preparation and strategy. Lease Sale No. 44: $27/acre Lease Sale No. 45: $38/acre	Awareness of the value of preparation and strategies. Lease Sale No. 46: $65/acre
Tract Valuation Techniques CERT identified lease tract evaluation approaches for the Fort Peck reservation.	Poor communication between the tribes and BIA lessening the effectiveness of lease sales.	The tribes now have clear-cut methods for identifying minimum acceptable high bids and criteria for offering tracts.
Sand and Gravel Operation CERT performed the geologic reserve evaluation, delimiting 12 million tons of minable sand and gravel reserves.	No Operations.	Potential identified to generate 29.5% rate of return and cumulative cash flow of $23.8 million.
Ute Mountain Ute Coal Haulraod CERT provided engineering analyses of start-up construction costs and life-of-project operating costs to negotiate coal haulroad right-of-way.	No activity.	The tribe's share of construction savings is $815,000. Total Net Present Value of agreement to the tribe is $5.8 million.
Oil and Gas Seminars CERT developed and presented a series of two-day seminars to explain the oil and gas industry to tribal members.	Limited understanding of basic concepts of the petroleum industry.	More than 500 tribal members enhanced their abilities to properly manage and control petroleum development on their reservations.
Crow Electric Power Generation Project A feasibility study was conducted to assess viability of locating 1000 megawatt coal fired facility on the Crow reservation.	Depressed coal markets limited potential development of Crow coal reserves.	Establishment of the facility would provide the tribe about $15 million per year in coal royalties and dividends.
Jicarilla Natural Gas Liquid (NGL) Plant CERT prepared a feasibility study and assisted in securing financing and markets for the products.	Loss of income potential.	The plant is scheduled to come on line in the summer of 1984 and generate nearly $20 million for the tribe during the first 10 years.

PROJECT DESCRIPTION	PRIOR TO CERT INVOLVEMENT	AFTER CERT INVOLVEMENT
Uranium Activities for Pueblo of Laguna CERT provided an in-depth evaluation of in-place uranium reserves, assessed the economics of recovering the ore, and is currently assisting in securing financing and markets for the uranium.	The value of the stockpiles would not be realized.	The Laguna Pueblo is proceeding with an orderly strategy to manage and develop their uranium reserves.
Spokane Reclamation A project was initiated for the Spokane Tribe to evaluate the suitability of the mining and reclamation plan for the Midnite Mine. Numerous meetings were held with the tribal council to identify the scope and requirements of the reclamation plan. Also, the responsibilities of both the USGS and the BIA were outlined to ensure that the federal government was properly involved in the mining and reclamation plan. In addition to this review of the mining and reclamation plan, CERT developed mining codes for the Spokane Tribe which included environmental controls for mining activities on the reservation.	The tribe had little information of either the magnitude of the environmental problems related to the Midnite Mine operation or the technical requirements needed to reclaim the mine to accepted conditions.	The Spokane Tribe understands technical requirements necessary to reclaim the mine and what their rights are under law to ensure proper reclamation. The tribe has used this information to legally pursue reclamation of the mine site.
Tribal Air Quality Assistance In conjunction with the U.S. Environmental Protection Agency (EPA), CERT provided technical assistance to tribes for the purpose of developing tribally operated air quality programs. Tribes were given assistance in proposal writing, training, monitoring, data analysis, codes, etc. Two tribal air quality workshops were organized and administered by CERT.	The tribes had to rely on the federal government to administer air quality laws on the reservations. Consistent with the desires of most tribes and the EPA, air quality resource management would be better accomplished at the tribal government level. However, most tribes did not possess the information and funds to develop such programs.	CERT assisted tribes with grant proposals to obtain funds and provided information to help tribes develop air quality expertise. Currently, 10 tribes have established air quality programs funded by the EPA. Tribal personnel are being trained to administer the technical and regulatory aspects of these programs. Sovereignty to manage their own environmental resources has been recognized and, therefore, these tribes have developed greater self-sufficiency.
Northern Ute Environmental Assessment An environmental assessment of the consequences of potential energy resource development on the Uintah and Ouray Indian Reservation was performed. The energy resource development options to the Ute Tribe evaluated included oil shale mining and processing, tar sands mining and processing, coal mining, and oil and gas production. The environmental resources examined were air quality, water quality and quantity, soil, vegetation and wildlife. The assessment included an analysis of the existing environmental conditions at each of the potential resource sites, a determination of environmental impact at each site and for the entire reservation area, and a preliminary identification of mitigation measures for the impacts found.	The tribe was interested in the potential development of their oil shale, coal, tar sands, oil and gas resources. However, the tribe was concerned about the potential adverse environmental impacts of any energy resource development. Also, the tribe was unsure of whether energy development planned nearby the reservation would cause environmental degradation to the extent that tribe resource development would be precluded under environmental law.	The Ute Tribe has information of the environmental consequences of their own resource development. The regulatory requirements for such development are also understood. The relationship between tribal environmental impacts and off-reservation impacts are known. The Ute Tribe will use this information to progress to the next phase in making critical decisions concerning energy resource development on the reservation.

PROJECT DESCRIPTION	PRIOR TO CERT INVOLVEMENT	AFTER CERT INVOLVEMENT
Laguna Reclamation The Pueblo of Laguna has requested that CERT provide technical support to the tribe in evaluating the reclamation plan prepared by Anaconda Minerals Company for the Jackpile uranium mine located on the pueblo. A review of the reclamation plan revealed some shortcomings. CERT has submitted comments to be used in revising the plan. A technical committee on reclamation consisting of members from the tribe (including CERT), the Bureau of Indian Affairs, Minerals Management Service, and Anaconda Minerals Company has also been formed. The purpose of the committee is to resolve differences over reclamation issues. The results of the meetings will be included in the text of an ongoing environmental impact statement (EIS) on reclamation of the Jackpile mine. If the pueblo is not satisfied with the results of these meetings, CERT will assist in including the pueblo's concerns in the "Preferred Alternative" of the EIS. The EIS process will be concluded in the spring of 1984.	The tribe wanted to ensure that the Jackpile Mine would be reclaimed in a manner consistent with the its desire for long-term, healthful use of the area.	The Laguna Pueblo is now better able to negotiate for reclamation of the Jackpile mine according to its own values. The tribe will be able to fully participate in the EIS process to define an accepted reclamation alternative.
Spokane Leaching Evaluation of contaminated mine water migration into downgradient surface water and groundwater on the Spokane Indian Reservation from an active open pit uranium mine was completed for the Spokane Tribe. Corrective measures were identified and incorporated into a reclamation plan.	The tribe had no reliable technical review of the water quality impact of mining activities on the reservation.	The Spokane Tribe is aware of the potential water quality problems associated with mining activities and are knowledgeable of the appropriate corrective actions necessary to mitigate the problems.
Tribal Environmental Review Process Toward a goal of streamlining environmental permitting processes while developing resources on Indian lands, CERT developed the "Tribal Environmental Review Process Manual and Permits Directory." The comprehensive, 133-page manual presents a model process for obtaining key environmental permits and fulfilling tribal and federal requirements for major energy projects on Indian lands, and includes an extensive directory summarizing various federal and state regulatory requirements.	No comprehensive analysis of environmental regulatory requirements for Indian lands previously existed. This could create confusion (and related delays) in the permitting requirements for energy development projects on the reservations.	Use of the manual in concert with energy development projects on Indian lands should substantially reduce the time and cost associated with permitting, provide effective coordination between all interested agencies and individuals, enhance decision making, and, most important, provide protection to air, water, cultural, and other environmental values both on and off the reservation.

PROJECT DESCRIPTION	PRIOR TO CERT INVOLVEMENT	AFTER CERT INVOLVEMENT
Northern Ute Environmental Impact Statement The Ute Tribe requested technical assistance in reviewing both the Uintah Basin Synfuels and Programmatic Environmental Impact Statements. These EISs addressed potential BLM decisions on tar sands and oil shale development in the Uintah Basin near the Uintah and Ouray Indian Reservation. CERT attended meetings with the tribe and federal agencies to ensure that tribal requirements were adequately addressed in the EIS. Also, both EISs were reviewed from the perspective of tribal values and concerns. Both socioeconomic and environmental issues were included in the reviews.	The tribe was concerned about the potential adverse environmental and socioeconomic impacts from proposed synfuel development near the reservation. However, the tribe was unable to judge the very technical analysis being performed by the Bureau of Land Management and industry to ascertain whether important tribal concerns were being addressed. The tribe wanted to participate constructively in the EIS processes, but were unsure of some of the technical issues.	Significant progress was made by the Ute Tribe in understanding the technical, socioeconomic, and environmental issues involved for the proposed developments. Also, as a result of the tribe's comments in the EIS processes, the BLM actively sought the tribe's participation in the analyses of impacts. Subsequently, the BLM, federal agencies, and industrial interests have recognized the sovereign role of the Ute Tribe on matters of energy development near the reservation.
Environmental Assessment of Uranium Development on the Hualapai Reservation The Hualapai Tribe requested technical assistance to assess the environmental consequences of uranium development on the reservation. The project included a preliminary analysis, evaluation, and assessment of potential environmental impacts to the Hualapai Reservation that could result from development of their uranium resources. Although primary emphasis was placed upon the assessment of possible radiologic impacts to air quality, water quality, soil, vegetation, and wildlife from both uranium mining and milling operations, a non-radiological impacts assessment was also conducted for these operations also.	The tribe had received proposals from energy firms desiring to commence uranium exploration activities. At the time, the tribe was unprepared to evaluate the proposals and reluctant to proceed until they better understood the issues associated with the development of their uranium resources, especially as they pertained to potential environmental impacts. Therefore, this project was undertaken by CERT to provide the tribe with enough substantive background information to understand the possible environmental impacts and concomitant mitigation methods currently available to address the salient, potentially adverse impacts associated with uranium mining and milling activities on the Hualapai Reservation.	The Hualapai Tribe now has technical information needed for a full evaluation of potential environmental consequences associated with uranium development on its reservation. Additionally, if the tribe chooses to pursue development, CERT's analysis may be used as a basis for partial fulfillment of technical requirements that it must meet in order to develop the project.
Northern Ute Socioeconomic Impact Assistance	Prior to requesting CERT's assistance, the tribe had received word that the BLM had not considered the reservation or the Ute Tribe in their evaluation of socioeconomic effects of synfuels development in the Uintah Basin. The tribe requested our assistance in identifying potential socioeconomic impacts; getting them included in the EIS; obtaining recognition of tribal impacts and mitigation needs by the BLM, the State of Utah, and the energy companies; and negotiating for impact mitigation and developing an impact monitoring office.	At this time, the final EIS document has been published and it incudes analyses of the socioeconomic impacts of synfuels development on the tribe. In addition, the tribe has held discussions with the State of Utah regarding requirements that energy firms negotiate with the tribe for impact mitigation. Energy companies have begun to approach the tribe to discuss their needs for mitigation and impact monitoring and we are in the process of establishing a monitoring program at tribal headquarters to be funded by energy companies.
Laguna Economic Growth Management Study	At the time of undertaking this study, the closure of the Jackpile mine and the inmigration of households from off the Laguna reservation led to conditions of very high unemployment and the emergence of social problems including increased incidences of alcoholism and suicides. CERT	An identification of four specific economic development options was completed as a result of the study. These options were subjected to a preliminary analyses of their employment and income effects and then reviewed and prioritized by the Pueblo of Laguna council. In addition, a methodology for evaluating the

PROJECT DESCRIPTION	PRIOR TO CERT INVOLVEMENT	AFTER CERT INVOLVEMENT
	was asked to undertake an inventory and assessment of the Laguna Pueblo's resources, economic base, business environment institutions, tribal goals and to identify economic development options compatible with these attributes and needs.	social and private costs and benefits of development options was presented to the Laguna Pueblo tribal council. CERT will continue its assistance to the Pueblo as it is requested in further evaluating or implementing economic development strategies.
Three Affiliated Tribes of the Fort Berthold Reservation, North Dakota – Financial Revision	The tribe's attachment "P" audit was discontinued and a disclaimer of audit findings was being considered by external auditors with possible funding agency intervention through the use of a federal monitor. Additionally there was a two year lag in program closures and audit documentation.	CERT financial staff directed Attachment "P" audit completion, audit documentation and records establishment. A redirection of finance department procedures, and staff evaluation with internal controls and procedures, and selection of a tribal finance officer, and re-orientation of finance departmental staff was also completed.
Assiniboine-Sioux Tribes, Fort Peck Reservation, Montana – Financial Management Assistance	Financial status of the tribes consisted of fifty-seven different programs, an incomplete budget process, with no central accounting or internal control measures. Incomplete documentation of indirect cost proposal negotiations and incomplete closure of various grants were also identified as problem areas.	CERT designed centralized accounting and budget systems, developed a uniform coding, and purchase/procurement system with chart of accounts. CERT also initiated a preliminary study of tribal computer/financial software packages and made recommendations for tribal internal control measures and evaluation.
Pawnee Tribe of Oklahoma – Financial Management Assistance	The tribal financial status consisted of seventeen different programs, an incomplete budget process with no internal control measures, and tribal book closures which had not been affected for the last three years. The Tribal Industrial Development Corporation books were also unauditable at the time of evaluation.	CERT reconstructed the Industrial Development books in auditable form and designed financial statements, chart of accounts, and uniform coding systems. CERT also established financial procedures, internal control measures, and directed audit and closure of tribal books for fiscal years 1980, 1981, and 1982. CERT completed and negotiated the 1982 indirect cost proposal negotiation process for the tribe.
Fort Peck Management and Personnel Assistance	Tribal administrative codes and administrative procedures for personnel were nonexistent and the property and finance records were outdated and not being used.	CERT and the tribes are currently in the process of completing administrative codes and administrative procedures for personnel, property finance records, and tribal documents.
Kalispel Management Assistance	The Kalispel Tribe had no means of reviewing the tribal organization's weaknesses and strengths. There was no established goals and objectives to assist the tribal council in the planning and managing of the tribe.	A management audit was completed which identified all council members' and program directors' perception on the tribe's strengths, weaknesses, accomplishments, and goals. The study further provided planning, management, and organization recommendations for use by council members and program directors and created an atmosphere for dialogue.
Jicarilla Apache Tribe Management Assistance	Nonexistent personnel and administrative code.	CERT and the Jicarilla Apache Tribe are in the final stages of completing a personnel and administrative code.

ENERGY RESEARCH AND DEVELOPMENT PROGRAMS

STATEMENT OF SUSAN KOKINDA, WASHINGTON REPRESENTATIVE, NATIONAL DEMOCRATIC POLICY COMMITTEE

Senator BURDICK [presiding]. Our next witness is Susan Kokinda, Washington representative, National Democratic Policy Committee.

Ms. KOKINDA. Good morning, Mr. Chairman, thank you.

Senator BURDICK. You may proceed.

Ms. KOKINDA. When I submitted my statement I did not really expect the President of the United States to be going on national television and endorsing the main outline of the program we are talking about, but that actually happened last night.

SPACE-BASED DIRECTED ENERGY BEAM SYSTEMS

In particular, I am talking about the historic decision by the President to embark on a program of a strategic defensive system on the frontier of technologies to give us the capability of destroying ICBM's before they enter the Earth's atmosphere. The President was not specific that he had in mind frontier plasma technologies, such as lasers and particle beams, deployed either as a ground based or space based kind of system.

Now that is a defense program clearly, but I think the President's call to the scientific and technological community to put our resources into the ability to develop and deploy this kind of system provides a basis for redefining our orientation. This is an orientation which we have been adamantly supporting for the past several years, more recently in the past year we have formulated a very specific program to accomplish precisely what the President laid out, and what it demands is not merely augmented funding for the precise defense programs in serious directed energy technologies, but we feel it also demands an effort to increase the funding for critical areas under this subcommittee's jurisdiction, including the fusion program, both magnetic and inertial confinement as well as funding for space efforts.

One particular program which is under the Department of Energy and which has enormous promise in terms of this kind of an area is X-ray lasers. This area recently had a slight loosening of classification and allowed people to talk somewhat more publicly about the potential of this kind of technology in the development of directed energy weapon systems.

FUNDING RECOMMENDATIONS

I think what we have to look at is a major increase in funding in critical areas which surround these kinds of directed energies. The fusion program should be put on the track mandated by the McCormick bill, and our estimated figures provided to us by the Fusion Energy Foundation indicate that we should be spending in fiscal 1984 for this program closer to $700 million instead of $460 million requested by the administration.

In inertial confinement, it is on the order of $460 million instead of $130 million, requested by the administration.

I think in other critical areas such as magnetic hydrodynamic kind of technologies, have direct implications for these weapon systems. However the money—well, let me say this, I am talking about a lot of money. Obviously, this does not include the money to be deployed into the specific defense systems, and this is to the conventional way of thinking, any time of budget cutting and tightening our belts.

I think two things must be said. One, the President's mandate to develop these systems cannot be done unless it is done on this kind of a policy basis and the basis of broad emphasis on a whole family of technologies which fall into the plasma of physics kind of area.

Second, something else needs to be said. We can cut the budget until there is nothing left of it and it is not going to give us an economic recovery. If you look at the fiscal base of the economy, we have lost so much in terms of actual plant equipment, farms, and actual laborers, that at this stage of the game we cannot internally regenerate a recovery. We have to throw GNP out of the window, because you could shut down your steel plants and open gambling casinos and GNP would go up. But we are in very critical bad shape, and it is our estimate the only way we can generate a real recovery is with the kind of technology shock wave that the NASA program gave us in the 1960's, the kind of real technology shock wave we saw with electricity at the turn of the century.

Moving into the plasma age with all the spinoffs that these new frontiers will bring with us can provide precisely the kind of economic and technology shock wave that we need for an economic recovery in the United States. I think the President's program laid out a mandate. It is now up to us to fill in the details in terms of how we will get there, both in terms of our economic security and strategic security, but it is our feeling this is really the only program which can, to a large degree, define our economic recovery and should define the direction we are taking in a broad area of research and development programs.

Thank you.

Senator BURDICK. Could you explain briefly how the direct energy became a beam or X-ray laser weapon? Are you familiar with that?

Ms. KOKINDA. I am not a physicist or a scientist, but in general, if you are referring to a defensive system, the way I understand it would work is that either from a ground-based system which might be the first generation type of capability, or more likely from the space-based system, what you can actually have is the ability to impact an ICBM before it reenters the Earth's atmosphere with an intense beam, either laser or whatever, with the kind of shock that is going to make the ICBM nonfunctioning.

Senator BURDICK. The reason I asked, a few years ago we approved an ABM system that was established in my State of North Dakota. We put $6½ billion in it, and now they are tearing it down, and that led me to believe that a lot of these scientific approaches need a great deal of study. We just threw that money away. We have a concept, but we should really cross-check it and do a lot of research on it before we barge into it. Do you agree with that?

Ms. KOKINDA. I agree it should be cross-checked, but I think some of the people in the field, such as Dr. Edward Teller, has recently expressed that while he was previously skeptical of the feasibility of these systems, that some of his younger colleagues had convinced him on the basis of recent breakthroughs in numbers of the area, that we are now talking about feasibility.

We clearly have a long way to go in terms of solving all the problems to deploy a space-based system, I think 12 to 15 years is probably the timeframe we are talking about, but I think the problem with the administration's approach, as of yesterday, said it was taking an extraordinarily cautious approach, and each time any promising technology got to the point where you want to build a demonstration model, funding was cut for that project, it was funneled into another area, and the whole thing set back 5 years.

What I believe the President is now saying is that we have got to look at the broad range of technologies in front of us, we have to mobilize what is the strength of the United States, its scientific capability, and put our minds to work to solve this problem as we did to put a man on the Moon.

Senator BURDICK. Well, all I am saying, I agree, we should take the modern era, and we had better be sure, because it is a costly approach if we are not right.

Ms. KOKINDA. In terms of the cost of the approach, in a sense what we are talking about here, frontier technologies means you will get greater payback from the U.S. economy than what you are spending. The figures for NASA are well known, from $4 to $7 back for every dollar spent, because with NASA, it raised the productivity of the entire U.S. economy. This is not high frontier, not conventional weapons up in space, this is the plasma age, and that will bring the kind of benefits to the economy and to the budget that are really probably unthought of at this point.

Senator BURDICK. I can't argue with a $7 return.

Thank you very much.

[The statement follows:]

STATEMENT OF SUSAN KOKINDA FOR THE NATIONAL DEMOCRATIC POLICY COMMITTEE

Thank you for the opportunity to appear before the subcommittee to present the views of the National Democratic Policy Committee which is a multi-candidate political action committee affiliated with Lyndon H. LaRouche and composed of 25,000 members in chapters throughout the United States.

For several years the National Democratic Policy Committee has appeared before this and other subcommittees of the Congress to urge continued and augmented support for such vital research and development programs as the Clinch River Breeder Reactor and controlled thermonuclear fusion and for such necessary and productive infrastracture programs as the Tennessee-Tombigbee project and water from Alaska projects. We have identified these projects as representative of the kind of "Great Enterprise" approach which has characterized the American System of economics -- an approach which recognizes the role of the government in fostering those advances in science and technology which are necessary to a healthy and growing agro-industrial base.

While "survival" levels of support for various of these projects have been forthcoming from the Administration and the Congress, both Congress and the President have missed the point. For the past three years, the government of this country has been obsessed with the budget, budget deficits and the abomination known as "the budget process." Congress and Administration have bought the lie that budget cutting and tax increases are the only tools at their disposal to bring the deficit under control. Yet those policies have either ignored, or in many cases, aggravated, the collapse of the actual physical base of the U.S. economy -- a collapse which, if unchecked, puts the federal budget deficit permanently out of control.

We can state with certainty that further budget cuts will not bring about an economic recovery. Nor will a drop in oil prices. Only an economic "shock wave," delivered to the U.S. economy by a massive infusion of new technology, can get the U.S. out of its current depression, and, as a byproduct, stem the budget hemorrhage. Such conviction is based on the analyses of the LaRouche-Riemann economic model, which has successfully predicted the collapse of industrial activity in this country for the past 13 quarters, while every other economic forecasting service has been wrong to the point of absurdity. Our model measures the ability of the economy to reproduce its physical base -- manufacturing, mining, agriculture, transportation, and the workforce employed in those activities. The service sector is treated as overhead, sometimes necessary overhead (such as teachers and scientists); oftimes as unnecessary and uproductive overhead (such as croupiers, many bankers and lawyers), depending on their impact on the physical base of the economy. (From that standpoint, the idiocy of the high tech/post-industrial service economy should be quite clear.)

When the U.S. economy is analyzed in this way, the collapse of the physical base is staggering, and irreversible without the delivery of a technology shock wave. Such a shock wave was delivered in the mid-sixties by the NASA program which returned, conservatively, four to seven dollars back to the U.S. Treasury for every one dollar spent. The U.S. needs a "Great Enterprise" of the quality of the Apollo program -- or the introduction of electricity at the turn of the century -- to restore its economic health.

Such a Great Enterprise project presents itself in the form of a Manhattan style push for the development and deployment of space-based directed energy beam weapons as a strategic defense system. The strategic and military reasons for providing the U.S. with such a system which can end the era of "mutually assured destruction" and usher in an era of assured survival, have been and will be outlined in other forums.

For the purposes of this subcommittee, under whose purview lie critical components of such a program, we will focus on the enormous economic implications of such a program.

The development and deployment of space-based directed energy beam weapons over the course of the next ten to fifteen years can only be done within the context of a major increase in funding for the specific directed energy programs themselves -- including the x-ray laser program under the DoE; and with an increase in funding for the controlled thermonuclear fusion programs (both magnetic confinement and inertial confinement) and the overall U.S. space effort.

In terms of the directed energy programs, current public estimates are that the Soviet Union is outspending the U.S. by 3 to 5 times. The x-ray laser program which recently underwent a certain loosening of classification guidelines -- at least in terms of the ability of individuals such as Dr. Edward Teller, to talk about the existance and potential of the program, is one of the most promising technologies for a second-generation beam weapon system. While funding levels for the program are not a matter of public discussion, published reports indicate that the program could clearly be put on an accelerated basis. The immediate technology spinoffs of the x-ray laser are momentous. Scientists will have the ability to see what goes on within living cells on the subatomic level, without killing the tissues, thus bringing biology and medicine a quantum leap forward. With x-ray lasers, researchers can make 3-D motion pictures of important biological processes such as the replication of DNA or the synthesis of proteins.

In addition, the same technology has broad-based potential application for technology and industry, from the diagnosis of fusion shock waves as they propagate, to new methods of mining and processing, as well as the generation of entirely new materials. Some of these important applications include x-ray lithography for the fabrication of microelectronic components, electron spectroscopy for chemical analysis, surface and radiographic nondestructive testing of metals, microradiography, radiochemistry, x-ray crystallography, and photonuclear processes.

In the larger area of controlled thermonuclear fusion and plasma physics research, the Soviets again have a significantly advanced programs, as evidenced by such Soviet-originated ideas as the tokamak, the tandem mirror machine, the radiofrequency quadropole accelerator and pulsed power MHD generators. All have direct relevance to the development of directed energy beam weapons.

The levels of funding for the U.S. program should as follows:

For magnetic fusion confinement, the FY 84 budget should be in the range of $690 to $700 million instead of the administration request for $467 million. For inertial confinement, the U.S. should be spending about $460 million instead of the administration request of under $200 million. In addition, the inertial confinement program should be declassified.

Aside from that, the overall funding for the ABM component of a defense beam weapon system should be $750 million for the first year of an Apollo-style approach. Hand in hand with this go necessary increases in funding for NASA and the support of other advanced technologies such as the breeder reactor, tne HTGR, etc.

Clearly, the NDPC is taking a different approach to ending the depression than anyone else in Washington. In a very carefully defined sense, we must spend our way out of the depression -- not with CCC jobs but with an economic shock wave to the economy.

The economic effect of the U.S. beam-weapon development program has been analyzed using the aforementioned LaRouche-Riemann model which can assess the type of non-linear changes that such a high-technology program would bring about. Two conclusions stand out from the model run:

*Without such a science driver, the U.S. economy is now so ruined that even a sane credit policy will not save it.

*With the productivity improvements to be immediately gained from the program, the economy will move rapidly to recovery and growth. The impact of the program is to significantly improve the performance of the overall economy. In every area of employment, output, profitability, and capital investment, the results of application of a high-technology research program are startling.

Lyndon LaRouche has called our beam-weapon program in its fullest ramifications, a "higher peace movement." The causes of war are not the existance of weapons systems, nuclear or otherwise, but the instabilities brought about by austerity and zero-growth policies. The restarting of the U.S. economy as a capital-goods exporter to a developing sector which is starved for the "American System" of economic growth is perhaps the singlemost important step that can be taken in the interests of peace on earth. The Non-Aligned Summit which recently concluded in New Delhi, India, included in its final communique the statement that the peaceful use of nuclear energy is the inalienable right of the citizens of every nation of the world. We would take that one step further and say that the economic revolution to be brought about by entry into the plasma age is the inalienable right of every citizen of the world.

PREPARED STATEMENTS

Senator BURDICK. I understand that some other statements have been received which deal with energy-related programs. They will be made part of the record at this point, along with other statements received before the record closes.

[The statements follow:]

STATEMENT OF THE AMERICAN PUBLIC POWER ASSOCIATION

The American Public Power Association (APPA), the national service organization representing more than 1,750 local publicly owned electric utilities throughout the United States, submits this statement to the Energy and Water Development Subcommittee of the Senate Appropriations Committee in support of certain energy budget requests for Fiscal Year 1984.

Specifically, this statement concerns the following FY 1984 budget requests:

Federal Energy Regulatory Commission -- $94.6 million
Army Corps of Engineers -- $2.6 billion
Federal Power Marketing Administrations -- $279.4 million
Bureau of Reclamation -- amounts relating to hydropower
Clinch River Breeder Reactor -- $270 million
High Temperature Gas-Cooled Reactor -- $35 million

FEDERAL ENERGY REGULATORY COMMISSION

APPA supports the Federal Energy Regulatory Commission's (FERC) budget request for FY 1983 of $94.6 million. APPA is particularly interested in the amount requested for hydropower regulation, which is $24.7 million, and the amount requested for electric power regulation, which is $19.8 million.

To offset its appropriations request, the Commission has proposed raising its filing fees and user charges, to recover nearly two-thirds of the budget. It is estimated that the Commission would recover $60 million.

While APPA supports the Commission's budget request, we cannot support excessive fee increases. There are several areas where fee increases are being proposed which would directly affect APPA members and which we believe are contrary to the public interest.

One area concerns annual charges for the use of federal dams by non-federal entities. Last month, the Commission proposed a rule to change the method to determine the annual charge for the use of federal dams based on a generic rule instead of a case-by-case method. It would retain its current approach of using a "sharing of the net benefits" method.

Either way, generic or case by case, the "sharing of the net benefits" method results in artificially high charges which are pegged to the cost of fossil fuel. Net benefits are defined by the Commission as the difference between the cost of the power produced at the hydro project and the value of equivalent power at the next least costly alternative. The difference is divided in half to determine the annual charge. According to the new proposal, the least cost alternative would be calculated by using regional estimates.

This "sharing of the net benefits" approach will certainly result in added revenues, but it is contrary to the purposes for which annual charges are assessed. In City of Vanceburg v. Federal Energy Regulatory Commission, 571 F. 2d 630 (D.C. Cir., 1977), the court noted that the annual charge should be compensatory and not used as a general revenue raising scheme.

Undoubtedly, the annual charge method is used by FERC as a general revenue raising scheme. It bears no relation to the government's costs. In some cases, the annual charge is so high that it discourages hydroelectric development. In addition, the cost of building the hydroelectric plant at the existing federal dam is paid solely by the non-federal developer, and, thus, it makes little sense to double bill the developer. Finally, the government reduces its own cost of development by encouraging non-federal development at existing dams.

In light of the above, APPA recommends that the FERC adopt a method of calculating annual charges, not to raise revenues, but to cover sufficiently the Commission's expenditure, encourage development of hydro, and result in a nominal fee.

APPA would like to thank the Subcommittee for its interest in the annual charges area, and, accordingly, we recommend that sufficient funds be appropriated so that FERC will not have to look for such extraordinary methods to finance its operation. We also request that the Subcommittee monitor FERC's annual charge scheme to ensure that the development of hydropower is not diminished by excessive charges.

Another area where APPA members would be directly affected concerns fees for the regulation of wholesale electric rates, and wheeling and interconnection orders. In September, 1982, the Commission proposed a rule to charge for regulating these services.

APPA believes the Commission does not have the authority to charge for this rate regulation. The Independent Offices Appropriations Act does not authorize fees as proposed by FERC. In 1974, the Supreme Court noted that fees incurred for providing benefits to the general public were not allowed under the Independent Offices Appropriations Act (National Cable Television Association v. United States, 415 U.S. 336 [1974]).

The Commission regulates wholesale rates to protect the public interest, approving not necessarily what the applicant requests, but what is ultimately determined to be just, reasonable, and nondiscriminatory for purchasers of that power, i.e., the general public. Since these regulatory activities of the Commission are undertaken primarily for the benefit of the general public and not for the special benefit of an identifiable recipient, the imposition of such fees are clearly not within FERC's authority.

While we understand the Commission's desire to increase revenues and thereby reduce federal expenditures, we must strongly oppose the means employed to this end. As the facts demonstrate, the small amounts spent on electric rate regulation have saved consumers several hundred million dollars. These are expenditures made and benefits provided to the general public and therefore not subject to fees.

We urge the Committee to appropriate the amount requested without the expectation that $60 million will be recouped through fees.

With respect to the Commission's budget request for hydropower regulation, APPA supports the request of $24.7 million as necessary to keep up with incoming applications. Over the past several years, there has been a tremendous increase in hydroelectric permit and license applications at FERC. For example, in FY 1978, the Commission received only 36 preliminary permit applications. Currently, FERC estimates it will receive about 600 permit applications in FY 1984. In the licensing area, FERC estimates it will process 336 licenses in FY 1984, a 360 percent increase over FY 1980 license applications of 73. APPA applauds the manner in which FERC has responded to the increased workload, and feels the budget request is justified.

With respect to electric power regulation, FERC has requested $19.8 million. Almost 900 public power systems buy part or all of their power from investor owned utilities. The rates charged by investor owned utilities for this wholesale power are regulated by FERC. As of March 1, 1983, wholesale rate cases pending before the Commission numbered 192. Last year at this time, there were about 170 cases pending. The entire rate application process can take as long as two years. Obviously, the length of time it takes FERC to determine whether a rate charged by a wholesale supplier is just and reasonable affects the economic health of many public power systems. Consequently, APPA recommends a funding level which will allow FERC to carry out its wholesale rate regulation in a timely manner.

FERC Review of Power Marketing Administration Rates

Last year, the House Appropriations Committee, Subcommittee on Energy and Water Development, in their report to accompany the water and power appropriations bill, expressed concern over problems and delays in the review of Power Marketing Administration (PMA) rates by the FERC (except Bonneville, where review procedures are established by statute). Based on this report language, representatives of the PMA's (except Bonneville) met with representatives of FERC and tentatively agreed to a review procedure which would significantly diminish FERC's role as currently exercised. Specifically, FERC would accept a certification from the Assistant Secretary that the PMA rates were as low as possible consistent with sound business principles, and would confine its review to determine whether the rates were adequate to recover the federal investment. Under the agreement, PMA customers would be deprived of the opportunity to seek FERC review of rates they felt were excessive.

The two national organizations representing the preference customers of the PMA's, APPA and the National Rural Electric Cooperative Association (NRECA), both adopted resolutions opposing the tentative agreement. We objected in particular to the denial of our right to seek a meaningful review of rates challenged as too high.

The concerns of APPA and NRECA were expressed to individuals within the Department of Energy. In addition, many local public power systems and rural electric cooperatives brought this issue to the attention of members of Congress, including members of this Subcommittee. This issue was the subject of some debate when the PMA's and FERC appeared to discuss their appropriation requests.

To date, this issue has not been resolved. There are some rumors, however, that customers may yet be deprived of a meaningful review process before FERC. It is extremely important that public power systems and rural electric cooperatives have an opportunity to challenge at FERC rate decisions made by the PMA's. The existence of the possibility of such a review is a strong incentive for the PMA's in the first instance to establish rates which are in fact as low as possible consistent with sound business principles. It also affords an opportunity to customers to challenge what they believe is unjust and inappropriate tampering with PMA rates in an effort to artificially increase rates for federal power. As this Subcommittee well knows, such efforts have occurred in the recent past and could certainly occur in the future. As a quasi-judicial, independent regulatory agency, FERC is in an ideal position to prevent or remedy such tampering. The customers must not be deprived of the protections afforded by FERC review.

CORPS OF ENGINEERS

The Corps of Engineers has requested $2.6 billion for FY 1984. APPA supports the Corps budget request for general investigations, continuing construction, and operation and maintenance of hydropower projects. APPA feels that funds for power projects are one of the country's most worthwhile and cost-effective investments, since these projects will help reduce our dependence on foreign oil, and money budgeted for power will be returned to the Treasury through the sale of electricity. Specific Corps projects which APPA supports include:

Libby Additional Units, Montana -- The Corps has requested $2.6 million in the 1984 budget to complete work at the main Libby Dam. The project will provide 420 MW of capacity. Startup of all four generating units is expected by May, 1984.

Harry S. Truman Dam and Reservoir, Missouri -- The Corps has requested $8 million for construction, and $3.6 million for operation and maintenance for the Harry S. Truman Dam and Reservoir. This 160 MW project's completion date is September, 1985.

Richard B. Russell Dam, Georgia -- The Corps has requested $51 million for this 300 MW installation located on the Savannah River, which will help meet the increased power requirements of the Southeast. The first power on line is expected in 1984.

Chief Joseph Additional Units, Washington -- The Corps has requested $16.7 million for work on 11 additional units with a capacity of 968 MW. The project is scheduled to be completed in September, 1986.

New Melones Lake, California -- The Corps has requested $7.3 million for this 300 MW capacity plant. The project is scheduled for completion September, 1985. Power has been on line since April, 1979.

Bonneville Second Powerhouse, Oregon and Washington -- The Corps has requested $18.5 million for continued construction of the 558.2 MW capacity, eight-unit second powerhouse located on the Columbia River. The entire project is scheduled to be completed in June, 1984.

FEDERAL POWER MARKETING ADMINISTRATIONS

APPA supports the FY 1983 budget requests of $279.4 million for the four Power Marketing Administrations. The budget includes $3.2 million for the Alaska Power Administration; $20 million for the Southeastern Power Administration; $36.2 million for the Southwestern Power Administration; and $220 million for the Western Area Power Administration. The fifth Power Marketing Administration, Bonneville, requires no appropriations since it operates on a self-financing revolving fund basis. Under the Pacific Northwest Electric Power Planning and Conservation Act (P.L. 96-501), Bonneville is required to consider conservation as a priority resource.

In FY 1983, all five Power Marketing Administrations marketed about 131 billion kilowatt hours. Revenues in 1984 are expected to be $3,542 million. It is important to note that the Power Marketing Administrations make more than they request in appropriations. Revenues from the sale of power and transmission services repay the capital investment and interest on the projects, and offset annual operations and maintenance costs. The Federal Power Marketing Administrations play an important role in the area of energy delivery. Their requests are reasonable and should be appropriated for FY 1984.

DEPARTMENT OF THE INTERIOR'S BUREAU OF RECLAMATION

The Bureau of Reclamation constructs and operates facilities to irrigate land and furnish water to 17 western states. Some of these projects produce power which is marketed by the Federal Power Marketing Administrations. The Bureau has requested a total of $6.4 billion for FY 1984. APPA supports the budget request of the Bureau which is directly related to hydropower, including funding in FY 1984 for two new construction starts: $11 million for the Headgate Rock Hydroelectric Project, and $3 million for the Buffalo Bill Dam Modification.

NUCLEAR

APPA supports continued funding for the Clinch River Breeder Reactor demonstration project because its construction will help ensure an adequate and reliable supply of electric power at reasonable cost in the decades ahead. The Clinch River Breeder will be a domestic resource which will use domestically-mined uranium. It represents an important energy conservation technology because it can extract energy from uranium "tails" that are discarded in the enrichment process for creating fuel -- an energy potential in excess of all U.S. coal reserves and three times OPEC's oil reserves. A successful breeder will produce more fuel than it consumes and can extend the life of domestic uranium resources by a factor of 60. The Clinch River Breeder project, which will proof-test U.S. breeder technology, is a significant step toward achieving a more secure energy future. APPA supports appropriation of the $270 million included in the President's budget for Fiscal Year 1984.

APPA also supports $35 million in funding for work on the high temperature gas-cooled reactor as an option for electrical generation and process heat energy. The advantages of the high temperature gas-cooled reactor included enhanced safety, licensing, and investment protection; minimal environmental impact; lower operation and maintenance costs; and improved fuel cycle efficiency.

STATEMENT OF DR. STEPHEN O. DEAN, PRESIDENT, FUSION POWER ASSOCIATES

It is a pleasure to have the opportunity to address your subcommittee again this year as you consider the Department of Energy's FY 1984 funding request for fusion energy research.

Fusion Power Associates is a non-profit corporation established in 1979 "to ensure the timely development and acceptance of fusion as a socially, environmentally and economically attractive source of energy." Fifty-two industries, utilities, and universities are currently members or affiliates of Fusion Power Associates.

The Department of Energy request for magnetic fusion energy is primarily for continuations of existing strong efforts in tokamak and magnetic mirror confinement activities, combined with efforts in supporting research, technology and alternate concept development. The Department originally requested an FY 1984 fusion budget from the OMB of $505 million, a figure I urge the Congress to restore. Within the constraints of the $467 million budget request presented, I believe the scientific program presented by the Department is fairly well balanced and will provide continued scientific progress. As it has for the past two years, however, the Department gives undue emphasis to the scientific aspects, and insufficient emphasis to the engineering development needs, of the program. Faced with relatively constant funding, the Department has preferentially protected the scientific programs. As far as I can tell, the Department has no intention of shifting major responsibilities to industry, or to seek the expeditious development of a practical fusion energy source as mandated by Congress in Public Law 96-386, the Magnetic Fusion Energy Engineering Act of 1980.

The major initiative to bring industry into the mainstream of fusion development--the EBT-P Project--has been called out for cancellation. Several years ago, private industry was encouraged by DOE to spend millions of dollars of its own resources to compete for the EBT-P project. McDonnell Douglas Astronautics Company, the winner of the competition, purchased a site in the city of Oak Ridge, Tennessee, to construct the EBT-P facility. An imaginative new procedure for industrial participation in fusion development was laid in place, which it was hoped would set an example of how research spawned within the national laboratory system could lead to industrial development and eventual commercialization. The proposal to abandon this effort, if approved by the Congress, would be detrimental to building an industrial base for fusion development.

We meet today at a time of great expectation in the fusion program. The Tokamak Fusion Test Reactor (TFTR) was completed in late December by an industrial team headed by Ebasco Services, Inc. under contract to Princeton University. The availability of this test facility opens up major new opportunities for advancing both the science and the technology of fusion. Its authorization back in the FY 1976 budget cycle was an act of vision and faith on the part of the Congress and the Executive and should provide a lesson to us in our present circumstances. The TFTR should provide landmark new results throughout the rest of the decade. Unfortunately, there are scant signs today that we will have any new capability in the 1990's. This is not the fault of the Congress, which has fought valiantly these past two years to preserve momentum in fusion and in many other energy programs. We need serious design efforts leading to the initiation and construction of new and improved facilities which will outperform the TFTR and MFTF in the early 1990's.

Fusion progress continues on a broad front. A new Tritium Systems Test Assembly was recently brought into operation at Los Alamos and large superconducting coils are arriving from all over the world to be inserted into the new Large Coil Test Facility at Oak Ridge. Magnetic mirrors are making progress and have sparked increased interest, especially in Japan. Vigorous support to expedite the completion of the Mirror Fusion Test Facility (MFTF-B) is required, lest this important project experience needless schedule delays and resulting cost increases. Support is also required for the construction of the FMIT materials test facility in Hanford.

There is a growing interest in the so-called "compact fusion concepts", defined as "concepts which have higher power density and, for the same total power, are significantly smaller than a conventional tokamak or mirror reactor." Although the compact concepts potentially have many attractive features uncertainties in their performance and development paths are larger than in the case of the conventional concepts. Private sector interest is evident in the compact concept area.

In addition to supporting a continued strong effort in magnetic fusion, I urge your committee to press for a strong civilian component in the inertial fusion effort now funded by the DOE military program. Good progress is being made in inertial fusion. Funding requests for inertial fusion are inadequate to properly support the operations of existing facilities and to maintain the construction schedule of the Particle Beam Fusion facility, PBFA-II.

The U.S. Government should attempt to maintain U.S. technical leadership in the intense world fusion effort. At the present time, the U.S. program represents only about one-third of the world effort and fusion devices larger than TFTR are under construction in Europe and Japan. The industrial skills required to engineer fusion power systems are today developing more rapidly in Japan and Europe than in the U.S. The technological skills and accomplishments which result from pressing forward on the frontiers of science and technology have benefits in a wide range of near-term applications. Such "spinoffs" play a major role in the continued evolution of advanced technological society and depend on the existence of a dedicated, stable cadre of scientists, engineers and organizations. We must not ignore the need to nurture the evolution of fusion skills in our industry.

The scientific and engineering communities from both the public and private sector have certified to the government that the fusion program is ready to move into engineering development. The focused, practical goals provided by the Fusion Act are still desirable and achievable and in the best interests of the country. I urge the Congress to maintain the Fusion Act in its present form and to continue to urge the Executive to follow the principles layed down in the Act as expeditiously and faithfully as possible. Most urgent are the needs to initiate a next generation fusion power device and to nurture the development of an industrial base for fusion engineering and technology.

STATEMENT OF DR. J. LEON SHOHET, CHAIRMAN, UNIVERSITY OF WISCONSIN-MADISON PLASMA COORDINATING COMMITTEE

SUMMARY

The University of Wisconsin urges the Subcommittee on Energy and Water Development of the Senate Committee on Appropriations to consider the following points in appropriating the 1984 DOE budget.

1. 164 persons on the Madison Campus of the University of Wisconsin currently are participating in the fusion program.
2. 3 major experimental programs -- Tokapole/Multipole, Phaedrus Tandem Mirror and Torsatron/Stellarator, along with the Fusion Engineering and Engineering and Theory Programs, comprise the Wisconsin effort.
3. The University is seriously troubled about its future in this area. Recent severe budget cuts in the tokapole/multipole and system studies programs, and an impending termination of the torsatron/stellarator program even after Congress has directed that DOE provide $1.5 million in FY 83 for the latter, are a current focus of this concern.
4. We urge restoration of the budget cuts for the Tokapole/Multipole and Fusion Engineering programs and full funding of $1.5 million in FY 83 and $2.0 million in FY 84 for the Torsatron/Stellarator Program.
5. These actions will permit the University to continue its well-earned major role in fusion research, to continue to provide broadly trained plasma and fusion scientists and engineers, as well as to fully develop its innovative and unique ideas.

I wish to express my appreciation to the Subcommittee for providing me with the opportunity to provide a statement for the record as a representative of the University of Wisconsin. I am Leon Shohet, and I am a professor of Electrical and Computer Engineering in the College of Engineering at the University of Wisconsin. I am the director of the Torsatron/Stellarator Laboratory, and I am the Chairman of the University's Plasma Coordinating Committee. I am also the Chairman of the University Fusion Association, whose members come from 50 of our nation's colleges and universities, who are all qualified in fusion.

The University of Wisconsin has been engaged in fusion research since 1962 when Professor Donald Kerst returned to the Physics Department. Programs at Wisconsin have been characterized by important discoveries in experimental plasma research, innovative fusion reactor studies, and recently by concommitant theoretical work. Wisconsin has always been interested in unique, flexible and out-of-the ordinary approaches, and has, at present, the greatest variety of experimental programs of any institution in the U.S., as well as many foreign laboratories.

Twenty-five faculty members, 49 scientific and professional staff, and 90 graduate students, make a total of 164 persons on the Madison Campus that are directly participating in this program.

Experimental facilities include the Tokapole/Multipole Laboratory, the Phaedrus Tandem Mirror Experiment, and the Torsatron/Stellarator Laboratory, as well as numerous smaller experimental devices. Table I shows the present funding for Wisconsin from both Department of Energy and National Science Foundation sources for Fiscal Years 1982 and 1983. The Wisconsin tradition is for the individual faculty member or group of faculty members to negotiate separately with the Department of Energy regarding the status of each experimental and theoretical program. We believe this permits the best interaction possible between each Principal Investigator and the Department of Energy. In addition, a University-wide plasma coordinating committee, which is composed of faculty and scientific staff, meets several times per year regarding curriculum matters, joint organization for scientific meetings, and support for numerous individual efforts. The committee has operated in basically this format for the past 16 years, and has been used as a model of interdepartmental cooperation and operation.

I now turn to a brief description of the major experimental programs. The tokapole-multipole experiments have been operating on the Madison Campus for more than 20 years. Figure 1 shows a photograph of the tokapole device. You may be interested to note that the large octupole is the same size as the PLT tokamak which is at the Plasma Physics Laboratory at Princeton, and was, until last December, the largest operating tokamak in the United States. The tokapole/multipole program was first to demonstrate quiescent operation of plasmas that were thought to be unstable, along with operation at high plasma pressure. Table II shows a list of other major achievements of the tokapole/multipole program.

Figure 2 shows a photograph of the Phaedrus tandem mirror experiment. This device, which is 32 feet long and 6 feet in diameter, has been the largest experiment constructed at Wisconsin. Its construction cost in today's dollars would be approximately $10 million. The Phaedrus experiment was notably the first to demonstrate that RF heating will work on a tandem mirror and, in fact, that only RF was needed to produce a tandem mirror plasma. It also was the first to demonstrate stability limits in a tandem mirror. Table III Shows a more extensive list of the Phaedrus program's achievements.

I now turn to the Torsatron/Stellarator Laboratory. This laboratory began its operation in 1973, with the acquisition, from the Culham Laboratory, in the United Kingdom, of the Proto-Cleo stellarator. You may know that the Atomic Energy Commission abandoned stellarators in favor of tokamaks in 1969. As a result, there was no activity in stellarators in the U.S. until Proto-Cleo arrived in Madison in 1974. I must point out that the staff of the Laboratory is most grateful to the National Science Foundation for providing the funds with which to purchase Proto-Cleo. It took a considerable effort on their part, especially since the Atomic Energy Commission had no wish to support such a program. Today, however, the Department of Energy is significantly interested in stellarators. For example, the $20 million ATF torsatron/stellarator has just been authorized for construction at Oak Ridge National Laboratory.

The Torsatron/Stellarator laboratory has had many achievements, including the first demonstration of Alfven wave heating and the first measurements of equilibrium and transport currents. In 1978 and 1979, the laboratory proposed the construction of two clearly innovative new stellarators: the WISTOR and WISTOR-U devices, the latter one of which is the basic design used for the ATF experiment, just authorized by the Department of Energy to be built at Oak Ridge. In fact, we believe that the Wisconsin program in stellarators is the main reason that there has been such a strong rebirth of stellarator interest in the United States today.

I am also pleased to tell you that on March 11 of this year, the University installed its latest stellarator, the IMS Modular Stellarator, which was designed and built entirely by the University of Wisconsin staff. It is the first modular stellarator in the world, and should it be successful in its initial operation, which has just begun, we expect that all future stellarators will be built using this principle. Figure 3 shows a photograph of the IMS device, after it won the Grand Prize of Design News Magazine as the most innovative engineering design of 1982. Table IV shows a list of additional achievements of the Torsatron/Stellarator Laboratory.

I now turn to the Fusion Engineering Program. This program began in 1965, with experimental fusion technology studies, and was commissioned to do the first full-scale reactor study in 1971. A Wisconsin team, often assisted by industry and national laboratories, has carried out major efforts in reactor studies during the last 12 years. Many different designs have been investigated, from tokamaks and stellarators to tandem mirrors to lasers and other inertial fusion devices. To give you an idea of the scope of this program, 11 major fusion reactor studies have been completed, over 500 reports written, with more than 89,000 copies distributed world-wide and over 230 articles in refereed journals have been published. The Fusion Engineering Program was the first to recognize the importance of beta as a figure of merit in fusion reactors, and the first to coordinate a realistic complete costing study involving industry, and the first materials testing reactor for fusion, along with 16 different detailed reactor related computer codes used by industry and national laboratories. Table V shows some additional "firsts" for this program.

A comparatively new development at Wisconsin has been the institution of a plasma and fusion theory program that is of itself, not directly connected with the experimental programs. This program's recent achievements are listed in Table VI.

Thus, I think you can see that the program at Wisconsin has been one of the major ones in fusion research for a long time. Over 135 PH.D. degrees have been awarded in fusion. The University is very proud of its contributions to the fusion program.

Yet, with all of this behind us, we at Wisconsin are greatly troubled. Over the past few years, events have occurred which have given the University Administration great cause for alarm regarding the intent of the Department of Energy in fusion, both at Wisconsin, and at universities in general. I would appreciate sharing some of these concerns with you.

1. Between the years 1982 and 1983, the Fusion Engineering Program in systems studies has had its budget cut by nearly 50 percent and the bulk of its activities transferred to national laboratories.

2. The Tokapole/Multipole Laboratory has had severe budget cuts and is threatened with yearly extinction.

3. The Torsatron/Stellarator Laboratory has seen its favorably reviewed proposals unfunded, and instead, its ideas were given to an inexperienced group at a national laboratory. Last year, even though Congress had recognized this problem, and directed the Department of Energy to provide Wisconsin with appropriate funding in year 1983, the laboratory has not received the funding, but instead, has been informed that Department of Energy wishes to completely terminate the laboratory's activities.

This is the state of affairs that greets the University of Wisconsin's Administration. I, personally, have been most grateful to the University for its willingness to "go the extra mile" and to undertake a massive effort on behalf of the fusion program at Wisconsin to ensure that it will remain viable.

We also believe that it is not sufficient merely to recite our problems, but is is imperative that we propose solutions to you. First, we believe that our problems are certainly not unique among the University Fusion Community. Thus, we would like to subscribe to the following general principles. They are:

1. Universities should be considered a national resource for research; industry a national resource for product development.

2. The present fusion budget provides only slightly more than 4% of its total to universities and has not kept pace with the scope and needs of the fusion program. This is an unconscionable loss of the great resources available in universities today. The High Energy Physics Program of DOE is an example of an appropriate relationship between universities and national laboratories.

3. Universities have contributed key ideas to the fusion program, but will no longer be able to do so unless they can be assured of continued, long term funding and are not forced into a role of simply providing service to the national labs. Otherwise, key personnel will be lost, competent research teams will be broken up, and university administrations will no longer encourage faculty to become involved in fusion.

4. Joint university-industry programs are both productive and very cost effective.

5. Universities are the only source of newly trained manpower for fusion and can only continue to attract and train "the best and the brightest" if the scope of the programs are meaningful.

6. We must provide a mechanism for all possible participants, either at national laboratories, industry or universities to develop and propose the most meaningful, cost-effective and relevant ideas, rather than relegating industry and universities to a subservient role to the labs. If the reviews are good and an institution is judged capable of carrying out the research, it should be funded. Nobody has a monopoly on good ideas and we need the best of all of them from all sectors to solve the fusion problem.

As far as the program at Wisconsin is concerned, we feel that the following must be done to sustain the program:

1. Fund, as Congress has directed, the Torsatron/Stellarator Laboratory at the level of $1.5 million in FY 83 and provide $2.0 million in FY 1984 to continue its present research program and its design study, together with its 3 industrial partners, of the next generation experiment.

2. Restore the funding level for the system studies program at Wisconsin to the FY 82 level, which will permit this program to retain its well-earned right to continue providing independent and thorough reactor analyses of fusion concepts as well as to continue to provide the training of fusion engineers so that fusion can be carried to the commercialization stage.

3. Provide the FY 82 funding level for operation of the Tokapole/Multipole program.

4. Assure the University of Wisconsin Administration that continued long-term funding is expected so that the University can rely on its status as a major fusion research center and can continue to encourage faculty and staff to work in this area.

TABLE I

DOE SUPPORTED PLASMA PHYSICS AND RELATED RESEARCH

Principal Investigator	Project	FY 82	FY 83	FY 83 Promised But Not Received
Hershkowitz, et al.	Investigation of RH Heating for Tandem Mirror Experiments and Reactor	$1,200,000	$1,400,000	
Shohet, et al.	Study and Design of a Steady Superconducting Torsatron	450,000	315,000 (1,500,000 appropriated by Congress)	
Larbalestier	Practical Superconducting Composite Conductors: Understanding, Optimization, and Development	40,000	65,000	
Kulcinski, et al.	Radiation Damage Studies for Fusion Reactors	147,000	161,000	
Callen, Emmert, Scharer	Fusion Plasma Theory	338,000	365,000	35,000
Hershkowitz, et al.	Experimental Investigators of Thermal Barriers	29,000	-0-	
Wolfer	Effects of Radiation and High Heat Flux on the Performance of First Wall Components in Fusion Devices	-0-	66,000	
Kulcinski, et al.	Critical Issues for Magnetic Fusion Reactors	90,000	-0-	
Kulcinski, et al.	Fusion Reactor Physics and Technology Studies	500,000	350,000	35,000
J. Scharer	Wave Launcher Heating Studies in the Ion Cyclotron Frequency Range	-0-	38,000	75,000
J.C. Sprott, et al.	Tokapole	500,000	525,000	-0-
	Octupole	425,000	-0-	170,000
		$3,719,000	$3,523,000	$315,000

NSF SUPPORTED PLASMA PHYSICS RELATED RESEARCH

		FY 82	FY 83
J.L. Shohet	Microwave and Electromagnetic and Interactions with Plasmas Linear and Toroidal Geometry	$ 64,310	$122,622
J. Scharer	Ion Cyclotron Harmonic and Non-Electron Cyclotron Plasma Wave Studies	41,140	81,190
Emmert	Experimental Investigations of Plasma Instabilities	49,600	53,670
J. Tataronis	Low Frequency Wave Propagation in three-dimensional Geometry	38,000	41,000
N. Hershkowitz	Study of Non-Linear Wave Plasma Interactions	-0-	49,500
		$193,050	$347,982

TABLE II

Significant Achievements of the Tokapole/Multipole Program

1. Minimum-B stabilization of toroidal plasma.
2. Confinement clearly in excess of Bohm.
3. Influence of rotational transform on fluxtuations and transport.
4. Observation of convective cells and associated diffusion.
5. Hundred-fold increase in T_i with ICRH (to 600 eV).
6. Beta greater than (10x) MHD ballooning limit obtained.
7. Generation of poloidal divertor tokamak topology.
8. Comparison of stability of dee- and square-shaped plasmas.
9. Stable discharges with $q \cong 0.4$ obtained.
10. Demonstration of $\vec{E} \times \vec{B}$ divertor.

TABLE III

Significant Achievements Of the Phaedrus Tandem Mirror Program

1. Significant plasma heating in a tandem mirror end cell using RF (Radio Frequency waves) at the ion cyclotron frequency and at twice the ion cyclotron frequency.
2. First demonstration of plasma heating in a tandem mirror central cell using RF at the ion cyclotron frequency.
3. First experimental demonstration of MHD stability limits in a tandem mirror.
4. Production of tandem mirror configuration using RF alone, without the use of neutral beams (RF-sustained tandem mirror).
5. Density and energy buildup from combined use of RF and neutral beam injection.
6. Demonstration of electrostatic confinement of the central cell plasma in an RF-sustained tandem mirror by detailed mapping of the radial and axial structure of the electrostatic potentials in the device.
7. Production of an MHD stable axisymmetric mirror-confined plasma in the central cell without any end cells, using RF heating at the ion cyclotron frequency.
8. Demonstration of electrostatic potential modification by electron heating using RF at twice the electron cyclotron frequency.
9. Low power RF start up of an axisymmetric tandem mirror plasma.

TABLE IV

Significant Achievements of the Torsatron/Stellarator Laboratory

1. First 3-dimensional MHD equilibrium calculation for stellarators.
2. First use of Alfvén waves for heating plasmas in stellarators.
3. First calculation that showed that tangential neutral injection would heat plasmas in stellarators most successfully.
4. First use of tangential plasma injection for stellarators.
5. First design of a modular stellarator.
6. First construction of a modular stellarator (design won the 1982 award of *Design News* as the most innovative engineering design).
7. First fully three dimensional ballooning mode stability calculation.
8. First analysis of particle transport in stellarators that reconciled numerical and analytic work. It showed that the transport can be much better than previously thought.
9. First direct measurement of electron heat transport in stellarators.
10. First direct measurement of the bootstrap and Pfirsch-Schluter currents.
11. First proof that super bananas do not exist in certain types of stellarators.

TABLE V

Significant Achievements of the Fusion Engineering Program

1. Double Null Poloidal Divertor.
2. Carbon Curtain Protection from disruptions.
3. Imbedded S/C Magnet Conductor Design.
4. Thermal Flywheel for Tokamaks.
5. Sloshing Ions in Central Cell of Tandem Mirror.
6. RF heated commercial Tokamak Reactor.
7. First Modular Stellarator.
8. Nb-Ta-Ti S/C Magnets.
9. H_2O Coolant of Fusion Blanket.
10. 3-D Monte Carlo Neutronics of Blanket and Penetrations.

TABLE VI

Significant Achievements of the Fusion Plasma Theory Program

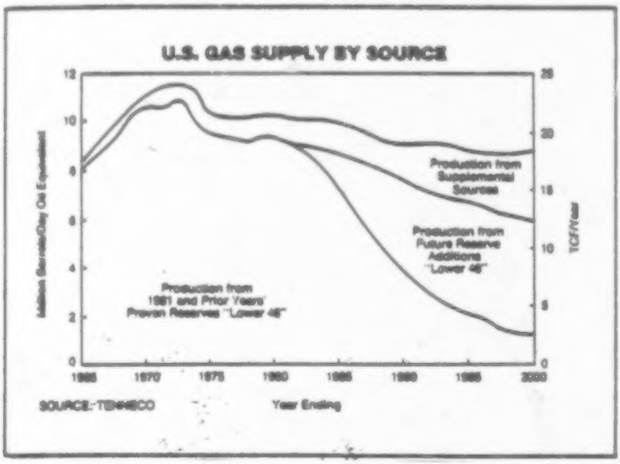
1. Analytic calculations of barrier-trapping currents in tandem mirrors with thermal barriers.
2. Improved calculations of neo-classical transport in rippled tokamaks and stellarators.
3. Calculaton of plasma flows and the bootstrap current in non-axisymmetric toroidal devices such as stellarators.
4. Investigation of rippling instabilities as a mechanism causing tokamak edge plasma turbulence.
5. Evaluation of neo-classical currents including bootstrap current in conjunction with experimental observations in the large octupole.
6. Estimation of ionization effects on self-consistent potentials in divertors.
7. Development of ray tracing codes for ECRH heating in tandem mirrors.
8. Coupling of ECH ray tracing code to transport simulation code for tandem mirrors.
9. Development of models for ICRF coupling and heating in tokamaks.

STATEMENT OF DAVID O. WEBB, SENIOR VICE PRESIDENT, POLICY AND REGULATORY AFFAIRS, GAS RESEARCH INSTITUTE

I appreciate the opportunity to submit written testimony before the Energy and Water Subcommittee regarding the FY 1984 DOE budget. I am David Webb, Senior Vice President of Gas Research Institute (GRI), an independent, not-for-profit scientific research organization created by the gas industry in 1976 to plan, finance, and manage an expanded and fully coordinated gas-related research and development (R&D) program for the mutual benefit of the gas industry and its ratepayers. This program is annually reviewed and approved by the Federal Energy Regulatory Commission (FERC).

We agree with the Administration's philosophy of letting the market govern the development and introduction of new energy sources and technologies, but we also believe that the transition must involve a true partnership between industry and the Department of Energy. This will require consistent government R&D policies and adequate federal funding for long-term research.

The need for a consistent federal policy and adequate funding for long-term gas research is evident when you examine where the nation will derive its energy supplies over the next 20 years. There is wide agreement between both private and federal forecasts that the U.S. will continue to rely on oil and gas for over 70 percent of its energy needs in the year 2000. While the U.S. has a short-term gas supply surplus now, more and more of the required gas supplies must come from supplemental sources as we approach the year 2000.



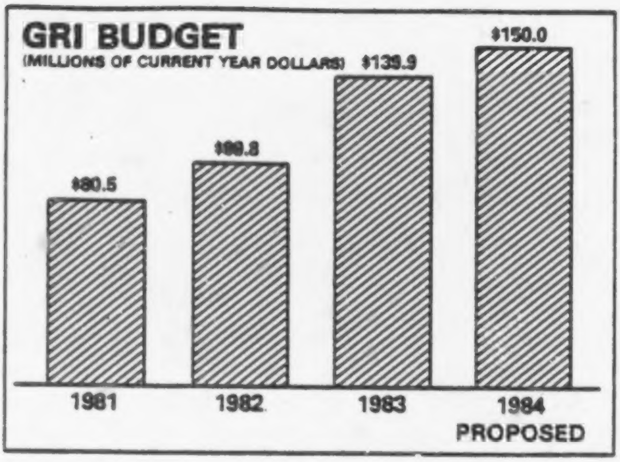
SOURCE: TENNECO

Establishing the technology base to develop these supplemental supplies at cost-competitive prices requires a lead-time of 6 to 15 years, depending on the resource. In other words, we must start now. If we don't take the steps necessary to develop the technology base required to use these domestic resources efficiently, the level of oil imports will rise rapidly, again increasing our dependence on insecure oil from politically unstable regions. The current softening of world oil prices provides us the opportunity to pursue this critical technology development in an orderly fashion rather than on a crash basis.

To illustrate the importance of providing a balanced and adequate federal gas research program, Secretary of Energy Hodel in recent testimony on the DOE budget stated, "I believe that energy has an importance far beyond most commodities because directly and indirectly energy is significant to every aspect of the U.S. economy . . . Another belief I hold very strongly is that overreliance on any one energy source is unwise and that a balance among energy resources is needed." GRI agrees with these positions. However, to implement this policy, DOE must continue to provide a stable funding base for long-term, high-risk gas-related research while industry is increasing its funding of near-term research. The budget proposed by DOE does not support this policy.

GAS INDUSTRY RESPONSE IN NEAR-TERM R&D

In contrast to the inconsistency in the federal policy for and funding of long-term gas research, the response of the gas industry to the revised government R&D policy has been rapid and very impressive. GRI will propose to its Board of Directors a 1984 budget of $150 million, an increase of 50 percent in two years, mostly for near-term research. GRI's funding for research in efficient utilization continues to receive the largest budget increase from a level of $38.9 million in 1982 to a proposed level of $67.7 million in 1984, or approximately 54 percent of the total R&D budget.



GRI's emphasis on near-term research has significantly contributed to increased levels of coordinated funding from private industry. Industrial coordinated funding has increased from $8.8 million in 1979 to an expected $30 million in 1983. The majority of coordinated funds are in areas that will be commercial in three to five years. Therefore, to provide a stable base of funding for long-term gas research, DOE should fund approximately $40 million in the FY 1984 budget for programs under this Subcommittee's jurisdiction.

RECOMMENDED GAS-RELATED RESEARCH PROGRAM

Without adequate, continued funding for the long-term R&D needed to establish a sound natural gas technology base, some sources of gas will not become available at competitive prices within the time required to prevent permanent market loss to imported oil. In order to help avoid this scenario, GRI makes the following recommendations:

	FY 1982 Appropriation	FY 1983 Appropriation	FY 1984 Gas Industry Recommendation
GEOPRESSURED RESOURCES	$17.3 million	$8.4 million	$12.0 million

While GRI's research efforts in this area have focused on near-term recovery of free gas trapped in reservoirs, the DOE program has focused primarily on the long-range recovery of methane dissolved in brine. Recently, an industry committee assessed the DOE program in view of the budget cuts and recommended that DOE complete the long-term (two-year) testing of the four design well projects. (See attached draft report) No new well tests were recommended until the current projects are completed and additional funding is provided. GRI supports these recommendations and proposes that a logical next step is to broaden the program to include a design well test in a hydropressured aquifer which may or may not include free gas. This test would provide information on gas liberation and transportation, reservior and fluids properties, and artificial lift requirements to produce gas and brine. DOE has a legitimate and important role in R&D for enhanced recovery of gas from geopressured and hydropressured aquifers due to the long-term nature of the research and its potential high payoff.

BIOMASS	FY 1982 Appropriation	FY 1983 Appropriation	FY 1984 Gas Industry Recommendation
	$20.5 million	$16 million	$20 million

The unique advantages of biomass make it an excellent candidate for many regions of the United States that lack conventional energy resources. To provide a model for developing biomass energy programs on a regional basis, GRI began a program with the University of Florida's Institute of Food and Agricultural Sciences. DOE should expand the regional biomass concept by providing $5 million in the FY 1984 budget to establish four or five regional projects or centers.

GRI is conducting research on plants, such as seaweed, which grow rapidly in the ocean and can be converted to methane. Marine farms, once developed, would not compete with valuable land space needed for food production. GRI is currently involved with projects at Catalina Island, the Santa Barbara coast, and in New York, using kelp indigenous to each area to determine the economic feasibility of this concept and the kelp growth rates and subsequent methane yields. Federal funds of $2 million should be directed at basic research on increasing kelp yield through selective genetic engineering.

Federal support is needed in biomass conversion, growth, and harvesting. It is recommended that $5 million be committed to conversion technologies to include work with grasses and herbaceous feedstocks on a regional basis to allow resource assessment of the use of these crops for methane production, to investigate environmental effects of the removal or utilization of agricultural residues from fields, and to continue macroalgal growth studies without being confined to land-based systems.

In addition, we recommend $9 million be committed for continuing work with silviculture test plots and biomass conversion studies with an emphasis on thermochemical gasification for high-solids, high-lignin feedstocks with an emphasis on the production of high-Btu gas.

	FY 1983 Appropriation	FY 1984 Gas Industry Recommendation
HYDROGEN	$2.5 million	$3 million

As a future fuel, hydrogen produced by decomposing water with a series of chemical steps using high-temperature solar or nuclear heat could provide a large and cost-effective supply of hydrogen with could be used as a chemical fuel for heating and transportation and as a feedstock for the chemical and petrochemical industry.

	FY 1982 Appropriation	FY 1983 Appropriation	FY 1984 Gas Industry Recommendation
LNG SAFETY	$6.3 million	$3.0 million*	$5 million

GRI has been concerned with DOE's plan to terminate its LNG research program and close the test site at China Lake, California, where LNG spill testing has been conducted. GRI recommends the government establish a national liquid spill test site in Nevada where large quantities of LNG or any hazardous liquid material which vaporizes could be released and tested. It is estimated that $3.5 million is needed to establish the site and $1.5 million is needed for the initial manpower and administrative costs. This is a one-time expenditure since future costs of $500,000 a year for manpower to conduct the tests would be covered through user fees. Industry strongly supports establishment of this facility and the user fee concept for future operation.

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*It is unclear if funding to establish the Nevada test site facility is included in the FY 1983 Continuing Resolution. If, in fact, funding is committed in FY 1983 to establish the test site, only the $1.5 million is needed for the initial start-up activities in 1984.

SUMMARY AND RECOMMENDATIONS

A viable federal program consistent with Administration energy policy requires a budget in FY 1984 for a long-term gas research program of approximately $40 million. This recommendation is consistent with the level of funds appropriated by Congress for gas-related research in FY 1982 and is approximately the same as appropriated by this committee and Congress just three months ago for the FY 1983 funding level.

GEOPRESSURED-GEOTHERMAL
WELL TESTING PROGRAM REVIEW GROUP

Meeting Report

November 3-4, 1982

Baton Rouge, Louisiana

I. INTRODUCTION

A meeting of the Ad Hoc Geopressured-Geothermal Well Testing Program Review Group was convened by Louisiana State University at the request of the Division of Geothermal Energy and Hydropower, Department of Energy, Washington, D.C. The meeting was held on November 3rd and 4th, 1982, in Baton Rouge, Louisiana. Mr. Bennie DiBona, President of Drilling Research Laboratory, Inc. served as Chairman of the seven-member industry group. The members were selected by the Chairman because of their expertise in well testing and reservoir analysis and their familiarity with the DOE's geopressured-geothermal program. All of the group members have been monitoring the progress of DOE's program for their respective companies for several years. The members of the Group are listed below:

Bennie DiBona, Chairman
President,
Drilling Research Laboratory, Inc.
400 Wakara Way
Salt Lake City, UT 84108

- Dr. Charles Mathews
  Senior Consultant, Petroleum Engineer
  Shell Oil Company
  P. O. Box 2463
  Houston, TX 77001

- Dr. Robert Christopher
  Director of Development Administration
  United Gas Pipeline Company
  Box 1478
  Houston, TX 77001

- Mr. Al Schlemmer
  Research Advisor
  Texas Eastern Corporation
  P. O. Box 2521
  Houston, TX 77001

- Dr. Weldon Winsauer
  Senior Engineering Advisor
  Exxon, U.S.A.
  P. O. Box 2180
  Houston, TX 77001

- Mr. Ernest Geer
  Transco
  Box 1396
  Houston, TX 77001

- Dr. Leo Rogers
  Co-Production Program Manager
  Gas Research Institute
  8600 Bryn Mawr Avenue
  Chicago, IL 60631

II. PURPOSE OF REVIEW GROUP

The purpose of the Review Group was to review the planned well completion and production testing programs for each of the design wells drilled under the DOE geopressured-geothermal program and make recommendations for maximizing the collection of data on the characteristics and production potential of geopressured reservoirs within projected budget constraints. In addition, the Review Group was to make recommendations on the disposition of the design wells (including disposal wells) after the planned DOE production testing programs are completed. The Review Group was to evaluate several options for disposition of the wells including: 1) plugging and abandonment; 2) transfer to private companies; and 3) transfer to non-profit research organizations (e.g., Gas Research Institute).

III. MEETING SUMMARY

GENERAL

On November 3-4, 1982, the Group held a well testing program review meeting in Baton Rouge, Louisiana. The meeting was attended by the Review Group Members and representatives from each of the major DOE contractors involved in the geopressured-geothermal program and government officials from each of the DOE offices involved with management of the program, (i.e., Washington, Las Vegas, Houston). (See attached list of attendees).

After introductory remarks by the Chairman and Dr. James Bresee, DOE Division of Geothermal Energy, on the purpose of the Review Group, contractor representatives presented detailed briefings on the status of each design well, the well completion and production testing activities planned for Fiscal Year 1983, the completed and planned reservoir analysis/modeling activities and the well test data requirements of other DOE geopressured research programs, (e.g., environmental monitoring programs). (See attached meeting agenda).

The following is a summary of the current status of each design well and the comments and recommendations made by the Review Group on each of the geopressured-geothermal wells. The wells are listed in order of importance, as determined by the Review Group, for obtaining a maximum amount of data of interest to the oil and gas industry on geopressured-geothermal reservoirs.

PLEASANT BAYOU WELL NO. 2: This geopressured test well, which was completed to a total depth of 16,500 feet, is located in the Chocolate Bayou Field in Brazoria County, Texas. A series of short-term pressure drawdown and buildup tests were run in this well in 1979 and 1981. Production testing resumed in September, 1982, and the well is currently producing about 20,000 bbls/day with a gas/water ratio of 22.5 cu ft/bbl. Gas sales contracts have been negotiated and the produced gas is being sold to a local pipeline company. Preliminary analysis of initial production test data indicate a linear barrier at ± 3,000 feet (no other barriers detected) and a reservoir volume at approximately 6×10^{10} ft^3 with a surface area of approximately 36 square miles. According to the DOE contractor responsible for this project, Fenix & Scisson, current plans include producing the well with a "pumper-type" operation beginning in January, 1983 and continuing through the lease period with gas-sales revenues covering all the cost of operation and maintenance.

Comments:

- Objectives of verifying reservoir size, maintaining high production rates (i.e., 20,000 bbl/day), and production of salable gas have essentially been met. Production testing should be continued to determine problems (e.g., disposal well, surface equipment, etc.) resulting from long-term production and to determine areal extent of reservoir with more confidence.

- Don't need to test all sands in the geopressured interval. Data from testing one sand at 20,000 bbl/day can be used to model reservoir and extrapolate to other sands.

Recommendation:

Regardless of whether or not sufficient revenues are received to cover cost of operation and maintenance of the Pleasant Bayou Well, the highest priority should be assigned in the program to continuing production of this well through the lease period (as a minimum) and up to two years of cumulative production (if the lease period can be extended). Production should continue from the existing perforated interval at approximately 20,000 bbl/day with consideration being given to increasing flow rates up to 40,000 bbl/day toward the end of the planned production testing period. The production data will enable validation of a number of geological, geophysical and engineering studies conducted in the resource assessment and reservoir selection phases of the program.

L. R. SWEEZY WELL NO. 1: This geopressured test well, which was completed to a total depth of 13,612 feet, was drilled in the North Parcperdue Field in Vermillion Parish, Louisiana. In addition to determining geopressured reservoir characteristics, a primary objective of this well was to provide data on the productivity of a limited reservoir for evaluation of long-term production parameters, (e.g. maximum producible rate, ultimate total recovery, reservoir drive mechanism). A short-term production test was conducted between April 26th and June 9th, 1982 and preliminary reservoir parameters were established. Flow rates were limited to approximately 10,000 bbl/day because of sand production problems. The gas/water ratio was also established at approximately 16 cu ft/bbl. Preliminary analysis of short-term test data indicates that the reservoir does not appear to be as confined as originally postulated, with a surface area of at least 960 acres. Therefore, the planned 8-9 month pressure drawdown period at a flow rate of approximately 10,000 bbl/day will be insufficient to deplete the reservoir. Current production testing plans include flowing the well at up to 10,000 bbl/day til mid-1983 interrupted by periodic short-term pressure build-up tests with wireline tools in the hole unless sand production problems require termination of the tests. The well will then be plugged and abandoned and the site returned to the landowner.

Comments:

- Well should be produced for a sufficient length of time at safe flow rates to draw down reservoir to determine boundaries and obtain geochemical data to answer recharge questions, (e.g., shale dewatering).

- Continued production through Fiscal Year 1983 could be long enough to detect any water produced from shales.

- Further analysis of geophysical and geological information on this test site should be conducted to resolve reservoir boundaries.

Recommendation:

Production testing, (i.e., drawdown and buildup tests) should be conducted at safe flow rates through Fiscal Year 1983, or as long as possible, in order to resolve reservoir boundaries and determine any recharge mechanisms. This well has a lower priority than Brazoria, however, unless sand problems are encountered, it should be tested through Fiscal Year 1983.

GLADYS MCCALL WELL NO. 1: This geopressured test well was completed to a total depth of 15,831 feet in Cameron Parish, Louisiana. As of the meeting date, no production tests have been conducted on this well. Current plans include running five-inch production tubing in the well and testing the lower part of Sand #9, then the upper part of this sand, and finally perforating additional sands up the well in order to reach production rates of approximately 40,000 bbl/day for an extended period of time (because of budget constraints, production testing will terminate by the end of Fiscal Year 1983 unless additional well problems require an earlier termination). There is considerable interest in this well because well logs indicate that Sand #8 may contain considerable quantities of "free-gas" or gas in excess of saturation at reservoir conditions.

Comments:

- Sand #9 should be tested first to determine gas/water ratio. Considering that the Gladys McCall well has penetrated the thickness sequence of sands identified in the geopressured resource assessment program, additional sands should be perforated to reach a maximum flow rate of at least 40,000 bbl/day for production drawdown/buildup tests.

- Sand reservoirs should be brought on stream slowly in this well based on recent experience with wells in South Texas.

- Reservoirs should be produced for sufficient period of time to determine reservoir characteristics, particularly boundaries. If gas production is sufficient to warrant construction of surface treating facilities and pipeline, gas sales contract should be negotiated. Revenues should be used to continue to flow well for up to 2 years to better evaluate long-term production problems and economics of gas production.

Recommendation:

Considering the thick sequence of sands penetrated by the Gladys McCall well, a number of sands should be perforated to achieve flow rates up to 40,000 bbl/day (this may be the only well in the program capable of reaching high-flow rates) for pressure drawdown/buildup tests. If revenues from gas sales can be achieved, flow tests should continue for up to two years to determine long-term production potential and economics. This well has a research priority lower than Brazoria (because of the extensive investigations on that reservoir) and about the same priority as the Sweezy Well, however, the potential for gas sales on this well may elevate its priority ahead of the other two wells.

AMOCO FEE WELL NO. 1: This geopressured test well was completed at a total depth of 15,740 feet in the Wildcat Field in Cameron Parish, Louisiana. Two short-term production tests were conducted in the well with total fluid production of approximately 430,000 bbls and gas/water ratio between 16 and 25 cu ft/bbl. Reservoir boundaries have not been determined although approximately 7,800 feet in radial distance from well has been tested. Preliminary analysis of test data indicates restricted flow angle from reservoir (<27°), possibly due to intersecting faults.

Comments:

- Restricted reservoir associated with initial Miogyp sand perforated limits long-term production rate to about 7,000 bbl/day, therefore, additional sands must be perforated for continued testing.

- The testing of this well has the lowest priority in the geopressured-geothermal program.

- Well should be kept in "caretaker status" until testing has progressed further in the other test wells, probably til mid-summer 1983. At that time, a better decision can be made as to whether to repair tubing in the well or plug and abandon the well.

- Some group members indicated that many private companies would test the well for a short period without repairing the small leak in the production tubing. This alternative should be considered further before funding for the repair of the tubing at $500,000 or more.

Recommendation:

Keep Amoco Fee Well on caretaker status until progress is determined for the other higher-priority test wells. In mid-summer 1983, determine whether to repair production tubing or plug and abandon the well. DOE should re-evaluate more thoroughly whether to conduct a short-term production test in this well without repairing the small leak in the production tubing.

DISPOSITION OF WELLS

Considerable discussion was held between Group members about the disposition of the geopressured-geothermal test wells, including possible takeover by industry or a non-profit research organization. Serious doubt was expressed by the members about the takeover of the wells because of the small net revenues projected (approximately $100,000 per year for the Brazoria well) when compared to the risks associated with the operation and maintenance of the wells, (i.e., one workover operation could cost in excess of $500,000). In addition, the only non-profit research organization which may be interested, the Gas Research Institute (GRI), does not presently have sufficient funds to assume the responsibility for these wells. In addition, GRI is concentrating its program on co-production of gas and water from other types of reservoirs. GRI is interested in continued cooperation and coordinated funding of R&D tasks on these wells which are of interest to both the GRI coproduction program and the DOE Geopressured Geotherma energy program.

It is the recommendation of the Group members that DOE investigate turnover of the wells, (i.e., production and disposal wells) to the lease holders in exchange for any data from long-term production of the wells, and a share of possible revenues. If this is not possible, perhaps the only viable alternative is to plug and abandon the wells.

OTHER COMMENTS

If it is determined that the Department of Energy will phase out the geopressured-geothermal program, consideration should be given to establishing an archive for all program reports, papers, and data for possible use at a later date.

ATTENDEES

GEOPRESSURED-GEOTHERMAL WELL TESTING PROGRAM REVIEW MEETING

Baton Rouge, Louisiana
November 3-4, 1982

NAME	AGENCY OR COMPANY REPRESENTED	TELEPHONE
Review Group Members		
Bennie DiBona	Drilling Research Laboratory, Inc.	(801) 584-2405
Charles Matthews	Shell, Houston	(713) 729-4140
Weldon Winsauer	Exxon Operating Company	(713) 656-3336
Bob Christopher	United Gas Pipeline Company	(713) 229-4440
Ernie Geer	Transco	(713) 871-2333
Leo Rogers	Gas Research Institute	(312) 399-8269
Al Schlemmer	Texas Eastern Transmission Corp.	(713) 759-5466
Other Attendees		
Jim Bresee	DOE, Washington, D.C.	(202) 252-4898
Myron Dorfman	University of Texas at Austin	(512) 471-1162
Clay Durham	Magma Gulf. Co., Houston	(713) 870-1480
Larry Durrett	Magma Gulf-Technadril	(713) 999-6464
Keith N. Frye	DOE, Fossil Energy, Washington, D.C.	(301) 353-2703
Sabodh K. Garg	S-Cubed	(714) 453-0060
Fred Goldsberry	DOE/GPA-Houston	(713) 999-0745
Tom Kraemer	U. S. Geological Survey	(601) 688-1501
Dan Langford	Eaton Operating Company	(713) 629-9764
Rashid Merchant	Intercomp	(713) 490-6132
Bob Morton	University of Texas Bureau of Economic Geology	(512) 471-1534
Frank O'Brien	Technadrill	(713) 759-6438
Philip L. Randolph	Institute of Gas Technology	(312) 567-3766
Ron Stearns	DOE/Nevada Operations Office	(702) 734-3424
Randall Storm	Dow Chemical USA	(318) 856-7223
Bill Thompson	University of Texas at Austin	(512) 471-3884
Virginia Van Sickle	Louisiana Geological Survey	(504) 342-6754
Ray Wallace	U. S. Geological Survey	(601) 688-1502
Fred Wrighton	LSU Center for Energy Studies	(504) 389-0930
Charles Groat	Louisiana Geological Survey	(504) 342-6754

AGENDA

GEOPRESSURED-GEOTHERMAL WELL TESTING
PROGRAM REVIEW MEETING

Baton Rouge, Louisiana

November 3, 1982

8:00 a.m.	Introduction - Mr. Bennie G. DiBona, Vice President, Terra Tek; President, Drilling Research Laboratory, Inc.
8:15 a.m.	Geopressured-Geothermal Program Status - Dr. James C. Bresee, Division of Geothermal Energy and Hydropower/DOE
8:45 a.m.	Status/Plans for Pleasant/Bayou No. 2 Well Testing - Mr. Ken Ortego, Fenix & Scisson
9:45 a.m.	Coffee Break
10:00 a.m.	Status/Plans for Sweezy No. 1 (Parcperdue) Well Testing - Mr. Randy Storm, DOW Chemical Company
11:00 a.m.	Status/Plans for Amoco Fee No. 1 (Sweet Lake) Well Testing - Mr. Larry Durett, Magma Gulf/Technadril
12:00 p.m.	Lunch
1:00 p.m.	Status/Plans for Gladys McCall No. 1 Well Testing - Mr. Larry Durett, Fenix & Scisson/Technadrill
2:00 p.m.	Coffee Break
2:15 p.m.	Wells of Opportunity Program Test Results - Mr. Dan Langford, Eaton Operating Company
3:00 p.m.	Reservoir Simulation Study I Status - Dr. Philip Randolph, Institute of Gas Technology
3:20 p.m.	Reservoir Simulation Study II Status - Dr. Rashid Merchant, Intercomp
3:40 p.m.	Reservoir Simulation Study III Status - Dr. Sabodh Gargy, S-Cubed
4:00 p.m.	Well Test Data Requirements for LSU Research Programs - Dr. Charles Groat, Louisiana Geological Survey/LSU
4:20 p.m.	Well Test Data Requirements for University of Texas Research Programs - Dr. William Thompson, University of Texas at Austin
4:40 p.m.	Adjourn

November 4, 1982

8:30 a.m.	Introduction to Gas Research Institute's Unconventional Gas Research Program - Dr. Leo Rogers - Gas Research Institute
8:45 a.m.	Discussion/Recommendations on Design Well Test Program
10:15 a.m.	Coffee Break
10:30 a.m.	Discussion/Recommendations on Design Well Abandoment or Takeover by Industry
12:00 p.m.	Lunch
1:00 p.m.	Executive Session
2:00 p.m.	Adjourn

STATEMENT OF THE AMERICAN NUCLEAR ENERGY COUNCIL AND EDISON ELECTRIC INSTITUTE

This statement is submitted on behalf of the American Nuclear Energy Council (ANEC) and the Edison Electric Institute (EEI). ANEC represents more than 100 organizations having an interest in nuclear power, including private, public and cooperatively-owned utilities, manufacturers, architect-engineers and various firms in the nuclear fuel cycle. EEI is the association of investor-owned electric utilities. Its members provide about 78 percent of the nation's electricity, serving over 67 million customers.

A primary goal for the nation's energy future should be the early replacement of our demand on the depleting world reserve of petroleum, wherever practical, with the use of our abundant domestic solid fuels--coal and uranium. The best and earliest means of increasing the use of domestic solid fuels is through the increased use of electricity generated by coal and nuclear power plants. Every industry and Federal Government projection of the future mix includes a substantial increase in the electricity component. A large portion of the research and development programs of the Federal Government should reflect, permit and promote the goals of shifting from petroleum to solid fuels.

While conservation through greater efficiency in the use of energy must be encouraged and the search for economic alternative fuels be pursued with vigor, we must proceed to improve the use of those technologies that are available and develop those in which we have a high confidence of achieving success. Within the planning horizon of the utility industry, this means the increased use of coal and nuclear fission. Since they have the highest payoff, the Federal Government must support them with appropriate research and development activities. Both coal and nuclear fission must be used to achieve the desired high degree of overall reliability for the electricity supply system as we build new plants to serve the growing economy, displace the use of petroleum and replace obsolete facilities.

Nuclear energy is--and will continue to be for many years to come--a vital part of this nation's energy resources. Presently, some 11 to 12 percent of our total national output of electricity comes from nuclear power. Today nuclear generating capacity, some 65,000 MWe, exceeds the entire installed electric capacity as it existed in this country just 35 years ago. In addition to the 83 nuclear plants with operating licenses, 59 facilities have construction permits from the NRC. When completed, these will add another 65,000 MWe of generating capacity, and result in generation from nuclear of about 20 percent of the national total. By the end of 1981, nuclear energy was producing electricity in twenty-seven states. In that year, Vermont generated 78.1 percent of its kilowatt hours with nuclear, followed by Maine (56.3%), Connecticut (53.3%) and eight other states which exceed a 30 percent level.

The reliance on nuclear energy has provided major benefits to the customers of the electric utilities in terms of lower cost, diversity of fuel resources, and decreased reliance on imported foreign oil. When the nuclear power plants currently under construction or on order are completed, these plants, together with the plants in operation can provide the energy equivalent of more than 4 million barrels of oil per day. The programs and their funding levels in the DOE nuclear budget must reflect the important role that nuclear energy is to play in our energy future.

Some observers of the DOE nuclear budget claim that nuclear energy receives a disproportionate share of the overall energy R&D budget. After subtracting out programs which we feel should not be included in the civilian nuclear energy budget -- Advanced Nuclear Systems, $34.1 million directed toward the use of nuclear power systems in the government's space program, Remedial Action for those programs other than the cleanup of military related nuclear facilities -- we arrive at a budget figure of $777 million, which is less than 30% of the overall energy supply R&D budget and up slightly from FY 1983. The nuclear budget, in constant dollars, has declined over the last several years and enjoys a much smaller share than its critics maintain.

Breeder Reactors

The nuclear industry continues to support this nation's breeder reactor program, which is based on the Liquid Metal Fast Breeder Reactor (LMFBR) as the preferred technology. If nuclear power is to be a long-term energy option, breeders, because of their ability to significantly extend the productive life of natural uranium, must succeed conventional light-water reactors as the primary source of nuclear-generated electricity.

We fully recognize that the LMFBR technology entails major challenges that require massive efforts both in manpower resources and in development funding. Building upon the research and development efforts of the past 25 years, we are definitely at the point where a demonstration facility should be built and operated as soon as possible. Other steps will be required to provide the basic knowledge and confidence that is necessary for the electric utility industry to accept the LMFBR as a dependable power system. This program entails several more decades of effort. The timeframe, however, does allow the U.S. to develop an indigenous breeder reactor capability if it is pursued expeditiously.

Major research and development programs must be continued to minimize the overall risks associated with the application of breeder reactors. The fruits of the research of the past 25 years, however, should be applied and evaluated in a specific demonstration facility to identify those areas where weaknesses point out the need for more concentrated research. The Fast Flux Test Facility (FFTF) is the primary facility for basic material and fuel research. The next prudent and reasonable step is the construction and operation of an appropriate size demonstration facility.

The 375-MWe Clinch River Breeder Reactor (CRBR) is the right size to achieve a prudent extrapolation from the FFTF technology on a path of high confidence. The Clinch River design is based on many years of research and development experience. It has continually been upgraded to reflect current technology and the most recent safety standards for all nuclear plants. While the U.S. trails other countries in demonstration breeder plant operation, the Clinch River design incorporates features and innovations no other nation can claim.

Any alternative demonstration plant would have an overall higher cost and would not be available within the time-frame that is achievable with the CRBR. Clinch River should be constructed on an expeditious schedule to minimize unnecessary future delay costs. Its completion is the next and currently most important step in assuring that our country has access to the LMFBR on a timely basis.

The overall LMFBR program also must include the development of the breeder reactor fuel cycle which includes reprocessing, fuel fabrication and the development of systems to resist diversion of fissionable material.

Commercial Nuclear Waste Management

Last year Congress enacted the Nuclear Waste Policy Act of 1982 (Public Law 97-425) which has codified the Federal Government's responsibility for storage and disposal of spent nuclear fuel and high-level radioactive waste. The nuclear industry is vitally interested in how the Federal Government carries out this responsibility. DOE has responded vigorously to the mandates of the Act and we are supportive of its emphasis on the institutional issues and concerns and their importance to the success and ultimate public acceptance of this program. In this regard, the person chosen to head the Office of Civilian Radioactive Waste Management, established by Section 304 of the Act, should be as capable of handling the institutional issues surrounding the civilian nuclear waste management program as this person is with the technical ones.

Under section 304(d) of the Nuclear Waste Policy Act, repository-related research and development is funded from the Nuclear Waste Fund. The Fund receives its money from fees paid by the owners and generators of spent fuel and high-level radioactive waste. These fees derive ultimately from electric utility customers. Naturally, the nuclear industry, especially utilities with nuclear programs, has a significant interest in insuring that the funds are spent in the best interest of the electric utility ratepayers. We believe that utilities which must pay for the building of the necessary facilities should have the right to review in detail the DOE waste disposal program and the expenditure of funds for the Nuclear Waste Fund. These rights would give the parties most directly affected the ability to determine that the waste program remains on track. Utilities will be able to assure their customers and the regulatory bodies that set their rates, that the disposal fees are being properly spent. Some form of review rights would also allow us to assure that DOE will continue to properly allocate between repository-related and generic research and development. This ability to have access to the program will also allow us to speak authoritatively as the Congress reviews the program in the coming years.

Spent Fuel Reprocessing

The research and development program at the Barnwell Nuclear Fuel Plant in South Carolina should be continued. The utility industry supported Congressional actions in the past three fiscal years in the appropriation of funds for research and development at Barnwell. With completion of R&D in support of national energy and non-proliferation objectives in July 1983, Congressional funding for R&D at Barnwell is scheduled to end. It would be unfortunate if funding is not provided to use this unique national asset in some way for research, development and demonstration activities in the future.

The present Administration is supportive of reprocessing as a private investment business. Industry also wants reprocessing to move forward but is unable to commit to a major reprocessing program because of such things as the adverse effect of past governmental actions in this area. These include the previous Administration's ban on commercial reprocessing and efforts to terminate Federal Research and development funding. Industry also lacks confidence in the regulatory process, which it views as unstable and unpredictable due to the impact of ever-changing Congressional and regulatory agency attitudes. Consequently, alternatives are being discussed, and it is hoped that Barnwell may be operated as a demonstration facility on a cooperative basis, between the industry and DOE.

Three Mile Island

EEI supports the current participation of the Federal Government in the cleanup of the damaged reactor at Three Mile Island near Harrisburg, Pennsylvania.

Accordingly, we support the President's FY 1984 budget request for TMI-related activities. Significant milestones have been achieved during the past year with respect to cost-sharing proposals which would include the Federal Government, the States of Pennsylvania and New Jersey, the electric utility industry and the General Public Utilities ratepayers. We are optimistic that a comprehensive program for the cleanup can be achieved, and believe that continued Federal financial support is an important aspect of that program.

Gas-Cooled Reactors

The high-temperature gas-cooled reactor (HTGR) concept has potential for greater operating efficiencies, greater flexibility in reactor siting, and possible application for industrial process heat requirements. Development of the HTGR continues to be supported both financially and with managerial expertise through the utility supported Gas Cooled Reactor Associates (GCRA). Continued Government cooperation and financial support are vital to the success of the joint effort now underway.

Uranium Enrichment

We urge the Congress to continue its support for the development of gas centrifuge technology for uranium enrichment and the construction of the Gas Centrifuge Enrichment Plant (GCEP). The three gaseous diffusion plants have served the U.S. military, and domestic and foreign commercial nuclear power programs well. The diffusion plants, however, are highly dependent on large quantities of electric energy for their operation. Fifty percent of the total cost of providing uranium enrichment services is associated with the cost of electricity to operate the diffusion plants. A gas centrifuge process would use only 4 to 5 percent of the electricity used by the diffusion process to produce a unit of separative work (SWU). The GCEP offers obvious benefits both in conservation of energy resources and in potentially reducing the cost to customers. It is also an important element in maintaining our position in the international community as a reliable and competitive supplier of uranium enrichment services.

We also encourage the development of AIS techniques, which may one day provide an even more efficient form of uranium enrichment. We caution, however, that AIS research and development should not detract from GCEP manufacturing, construction and installation aimed at meeting its present schedule of 2.2 million SWU by 1988 and subsequent increments at Portsmouth, Ohio to a capacity of over 10 million SWU. The GCEP offers a high confidence path for more efficient uranium enrichment while AIS requires major developmental efforts to apply the technology.

Utilities pay the Federal Government for uranium enrichment services on a full cost recovery basis including, in FY 1982, 1983 and beyond, providing the funds for GCEP construction, AIS research and all related activities.

Conclusion

Economic and reliable electric energy must play a greater role in this country and this can be achieved only with the use of nuclear power and coal. Nuclear power is a domestic energy resource that is converted to a high grade flexible energy form -- electricity. Major Federal programs are necessary to permit this potentially large energy resource to be fully developed to serve the nation's growing economy, to displace the use of the world's depleting petroleum where practical and to replace obsolete electricity generating facilities.

STATEMENT OF MORGAN D. DUBROW, SENIOR STAFF ENGINEER, NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

Mr. Chairman, my name is Morgan D. Dubrow. I am Senior Staff Engineer of the National Rural Electric Cooperative Association (NRECA). NRECA is the national trade association of over 1000 rural cooperatives which supply central station electricity to some 25 million people in the rural areas of 46 states. Consumer demand for electricity in the agricultural areas of the nation last year showed little increase; our member system loads last year increased by about 2 percent.

NRECA supports the FY 1984 budget request for the Corps of Engineers, the Bureau of Reclamation, Department of Energy's power marketing agencies, and other energy programs. We also support DOE's nuclear programs for safety, breeder reactors, nuclear waste disposal, completing the fuel cycle, high temperature gas reactors and the Clinch River Breeder Reactor Demonstration Plant. NRECA emphasizes the need for:

- Funding of new construction starts of the Corps of Engineers and the Bureau of Reclamation
- $90 million for the Tennessee-Tombigbee Waterway
- $51.5 million for the Richard B. Russell Dam
- $2.6 million for Libby Dam
- $22.3 million for Garrison Irrigation Project
- $6.8 million for Fryingpan-Arkansas Project
- $3.0 million for Auburn-Folsom Project
- $180.6 million for Central Arizona Project
- $103.6 million for the Bonneville Unit in Utah
- $4.7 million for Atmospheric Water Resource Management
- $848.2 million for the nuclear program, including $270 million for the Clinch River Breeder Reactor
- $40.0 million for the high temperature gas reactor, $3.0 million for the HTGR Program
- $98.9 million for Columbia Basin and other Pacific Northwest projects

Restoration of Funding for Water Resource Projects

At our 41st annual meeting in Las Vegas, February 3, 1983, our members again unanimously passed resolutions supporting appropriations for a number of water resource and hydroelectric projects throughout the United States. NRECA encourages the Congress to fund studies for hydroelectric power development and comprehensive water resource projects. We support the request of the Corps of Engineers to the transfer of $140 million to operation and maintenance of waterways.

New Construction Starts

NRECA will support a proposed amendment of the FY 1984 budget to provide for various new construction starts by the Bureau of Reclamation and the Corps of Engineers. Our members again adopted resolutions expressing their willingness to work with the Administration in providing new hydroelectric facilities by entering into joint financial ventures with the states and local entities. We want our country to resume construction of needed new water resource projects.

Atmospheric Water Resource Management

We support the FY 1984 $4.7 million request to continue the cloud seeding technology being developed by the Bureau of Reclamation to increase water supplies for both short and long term water requirements in the arid West.

Tennessee-Tombigbee Waterway

We support $90 million needed to continue the construction of the Tennessee-Tombigbee Waterway. This project is over 85 percent complete, has a 2.8 to 1 benefit-cost ratio, and it will provide substantial benefits to rural cooperatives in the region.

Libby Dam

We support the FY 1984 request of $2.6 million to complete the work on the Libby Powerhouse. We hope there will be a resolution of the problem of authorization of Libby Re-regulation Dam so that Units 6-8, totalling 3.5 MW, can be installed at Libby and 88 MW at Libby Re-regulation Dam.

Richard B. Russell Dam

Funds in the amount of $51.5 million should be appropriated in FY 1984 for continued construction of the Richard B. Russell Dam Project on the Savannah River between Georgia and South Carolina. It will provide 300 MW of needed base load hydroelectric power and 300 MW of pumpback units, thereby increasing the power plant capacity to 600 MW.

Garrison Irrigation Project

The Bureau of Reclamation received $4.0 million in the continuing resolution in FY 1983 to maintain the Garrison Irrigation Project. We urge the Committee to provide $22.3 million in new funds in FY 1984 to the Bureau of Reclamation to allow the Bureau to work at its full capability. The development is consistent with our commitments to Canada.

Fryingpan-Arkansas Project

We support the appropriation of $6.8 million in FY 1984 for the Bureau of Reclamation's Fryingpan-Arkansas Project to complete the Mt. Elbert pumped storage power plant facilities, and to continue work on recreation, fish and wildlife facilities.

Auburn-Folsom South Unit (CVP)

We support the appropriation of $3.0 million in FY 1984 for the Auburn-Folsom South Unit which has a potential of 300 MW of hydroelectric power with the possibility of an additional 400 MW for pumpback. We urge the Committee to request a timely completion of studies so that in the near future the Bureau of Reclamation can go forward with this important project.

Central Arizona Project

We urge the Committee to appropriate $165.6 million required in FY 1984 to continue the orderly construction of the Central Arizona Project which is vital to the water supply for the State of Arizona. This would provide for the delivery of water to Phoenix as scheduled. We support additional funding in the amount of $15.0 million to restore the scheduled construction of the Tuscon Aqueduct to 1988.

Bonneville Unit, Central Utah Project

We request that the Committee appropriate $103.6 million in FY 1984 for construction of the Bonneville Unit of the Central Utah Project which has a potential of 144 MW of hydroelectric power.

Columbia Basin and Other Pacific Northwest Projects

We support $55.8 million for the Third Powerhouse at Grand Coulee including river basin stabilization and replacement of transformers G-19-24, $16.7 million for Chief Joseph and power plant additions, and $26.4 million for the Second Power Plant at Bonneville. We also support the early authorization and funding of the Second Powerhouse at McNary.

Federal Power Marketing Agencies

NRECA supports the $280.1 million for FY 1984 appropriation request for Federal power marketing agencies: $220.1 million for the Western Area Power Administration, $20.6 million for the Southeastern Power Administration, $36.2 million for the Southwestern Power Administration, $3.2 million for the Alaska Power Administration, and $517,000 for DOE's Office of Power Marketing. We also support the Bonneville Power Administration budget funded through its self-financing revolving fund procedures. We suggest that similar revolving funds for the other marketing agencies would be desirable and support proper legislation to achieve this end.

We again commend the five power marketing agencies for a job well done. We also note that all funds, both appropriated and from BPA's revolving fund, are fully reimbursable to the Treasury and that these agencies continue to pursue a policy to establish rates at a level that covers costs and meets repayment schedules.

Support for Nuclear Programs

NRECA supports the FY 1984 budget request of $848.0 million for the nuclear program. These funds are vitally needed to continue development of the breeder technology. This technology is essential to the long-range commercialization of breeder reactors which can meet our electric power needs for centuries.

We urge the Committee to provide all the funds requested and especially wish to support the following programs:

- $602.0 million for breeder reactor systems including $270.0 million for the Clinch River Breeder Reactor
- $37.0 million for converter reactor systems
- $22.6 million for commercial nuclear waste
- $41.8 million for nuclear fuel cycle
- $94.0 million for remedial action program

We strongly support restoration of the High Temperature Gas-Cooled Reactor (HTGR) program at the Department of Energy recommended level of $40.0 million and $3.0 million for the HTGR Recycle Program. This advanced reactor system is supported by many public and private utilities and rural electric cooperatives through an organization known as Gas-Cooled Reactor Associates. Several utilities have expressed interest in owning and operating the Lead Plant HTGR, an 11-MW electric cogeneration system which will be completed by 1997.

We appreciate this opportunity to express our views.

STATEMENT OF STANELY K. BAZANT, PRESIDENT, COLORADO RIVER ENERGY DISTRIBUTORS ASSOCIATION

I am Stanley K. Bazant, President of the Colorado River Energy Distributors Association ("CREDA"). I am also Executive Vice President and General Manager of Plains Electric Generation and Transmission Cooperative, Inc. My business address is 2401 Aztec Road, N.E., Albuquerque, New Mexico 87107.

On behalf of CREDA, I wish to thank the Chairman and Members of this Subcommittee for the opportunity to appear before you in support of certain aspects of the Administration's FY 1984 Budget. Specifically, my testimony will be directed at requests for appropriations for the Bureau of Reclamation and for the Western Area Power Administration.

CREDA is a non-profit Colorado membership corporation comprised of 17 publicly-owned electric utility systems, organizations of publicly-owned electric utility systems, and state agencies located in the Colorado River Basin States of Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming. A complete list of CREDA's members is attached for your reference.

CREDA represents statutory preference customers which purchase over 90 percent of the electric power and energy produced by the Colorado River Storage Project plus significant portions of the Boulder Canyon and Parker-Davis Projects and 100 percent of the Rio Grande Project. These purchases are from the Western Area Power Administration ("Western"). CREDA's members render electric service to tens of thousands of rural, residential, commercial and industrial customers.

A. Department of the Interior, Bureau of Reclamation

CREDA supports the Bureau of Reclamation's overall request for new Budget Authority for FY 1984 of $1,002,585,000 and believes this is the minimum amount which should be appropriated by Congress for the Bureau's programs. Water projects which will be studied and constructed with these funds are an essential investment in this nation's water and power resources for the benefit of its citizens. Any restriction in this proposed appropriation will deny the nation full benefits from its resources.

1. General Investigation

While supporting the Bureau's overall program, CREDA is dismayed at the apparent contraction of the Bureau's vital program of research and investigations to study new ways of water resource development. The proposed reduction of nearly 25% in the Bureau's General Investigations Program impedes research into new ways to utilize water resources and the gathering of vital information which can be used not only by the Federal Government but by states and private industry. Savings achieved through reductions in research programs are often penny wise and pound foolish and Congress should give consideration to enhancing, not restricting, these important programs.

CREDA is pleased, however, to note that the Bureau is proposing seven new Project Investigations and three new Advanced Planning starts. These represent an important commitment to continuation of the Bureau's program.

CREDA specifically supports the new Project Investigation schedule for the Lower Virgin Unit of the Colorado River Water Quality Improvement Program, intended to investigate the viability of capturing Lower Virgin River saline underflows and surface flows and diverting them for industrial use in power plant cooling water. CREDA notes that a private utility has expressed interest in this project but assumes that the benefit of this program will be made available to the Bureau's "preference" customers on a priority basis, consistent with the reclamation laws.

CREDA also supports the Lower Gunison Basin Unit (Winter Water) of the Colorado River Water Quality Improvement Program as a new Advanced Planning start. This effort to eliminate certain winter water flows which increase river salinity through modification and extension of an existing rural water distribution system will enhance the water quality of the Colorado River.

CREDA notes that $4,715,000 is included in the President's Budget for continuation of the Bureau's Atmospheric Water Resources Management Program, but also notes that this is a substantial reduction from the Bureau's FY 1983 program. This important water resource development research effort should be continued at least at the FY 1983 program level.

It is disappointing to note that the Bureau intends to discontinue its Special Investigation for Hydro Power at Existing Facilities. While it is true that there is intense interest by non-Federal entities in this general area, the Bureau's decision may result in a failure to develop new hydro resources at existing structures which could generate revenues to assist in repaying project costs. This could deny "preference" customers needed generating capacity and the U.S. Treasury needed revenues from power sales. CREDA urges that this program not be discontinued but be continued at least at the FY 1983 program level of $225,301.

CREDA is seriously concerned about one new policy matter highlighted in the Bureau's budget submission -- that of giving high priority to projects which have the greatest potential for non-Federal financial support. While cost-sharing policies developed over the years under the reclamation laws are important, CREDA objects to the establishment of what it perceives may be a new direction in water project development by the Bureau. Specifically, the Bureau intends to continue its power peaking capacity study at the Dolores Project, the Crystal Dam Project and the outlet works of the Flaming Gorge Project. However, the Bureau has indicated in various public meetings that it will be giving priority consideration to projects where investor-owned utilities may be willing to contribute funds in advance of project construction in exchange for a first right to project power. This would be a serious departure from the reclamation laws, which guarantee municipally-owned and cooperatively-owned utilities a preference to the power produced at federal facilities. Municipally-owned and cooperatively-owned utilities have always paid the full cost of federal power projects plus substantial amounts of related irrigation costs; however, they have never had to contribute funds in advance of construction to perfect their traditional "preference" right to power. Congress should ensure that the Bureau does not interfere with or diminish the rights of "preference" customers contained in the reclamation laws under the guise of any new cost-sharing program with private utilities.

2. Construction Program

CREDA fully supports the substantially increased Construction Program of the Bureau for FY 1984. This program should be fully funded, including the Headgate Rock

Hydroelectric Project in Arizona which was included in the FY 1983 Budget Amendment as a proposed new construction start.

Proposed increases in the program for the Central Arizona Project and the Bonneville Unit, Central Utah Project represent important commitments by the Bureau to pursue these projects to completion and should receive full Congressional support. Congress should also consider increasing funding for other aspects of the Central Utah Project, including the Jensen Unit, Uintah Unit and Upalco Unit, as well as the Dallas Creek and Dolores Projects.

B. Western Area Power Administration

The Western Area Power Administration ("Western") plays an important role in the delivery of electric power from federal projects. Western is a vital link in making power resources available to the nation, as well as generating the revenues required to pay back the cost of power and irrigation projects. CREDA supports the full FY 1984 Western program of $219,630,000.

Western's Colorado River Storage Power System and Parker-Davis System are particularly important to CREDA members. CREDA specifically supports new activities scheduled to start during FY 1984 for these Systems, such as the Hayden-Craig to Shiprock/San Juan/Four Corners 345-kV Transmission System (Phase I), the Liberty Coolidge 230-kV Transmission Line and Terminal Facility, and the Coolidge-Saguaro 115-kV Transmission Line Upgrade.

Western has taken steps to increase power rates for projects where it believes repayment criteria indicate increased revenues are needed. While CREDA may share a difference of opinion with Western as to the timing and amount of these increases, CREDA reiterates its commitment to pay the full cost of all federal power generating facilities and related irrigation project costs as soon as and to the full extent of the incurrence of such costs.

CREDA also believes that the continued supervision of Western's power rates by the FERC provides an important forum where consumers of Federal power can voice any differences of opinion they may have over Western's ratemaking procedures. Western's ability to implement rate increases on an interim basis, subject to refund, where it believes such increases are indicated, assures the federal government that revenues will be raised when Western deems necessary. Western's unilateral interim rate increase authority underscores the importance of the FERC's role as an independent review body where consumers can obtain expert review of Western's proposed rates, and be assured that any excessive rates will be eventually adjusted to appropriate levels.

There have been suggestions made in the past by Department of Energy officials to reduce the FERC's rate review role for Western. These suggestions have been considered by CREDA, as well as by the two national organizations representing virtually all of Western's customers -- the American Public Power Association and the National Rural Electric Cooperative Association. Both of these associations have supported DOE's efforts to streamline the FERC rate review process; however, they have conditioned their support on continuation of FERC review as an important factor in protecting consumer interests for Western's ratemaking process. Their resolutions are attached to this Statement. CREDA urges the Congress to indicate its support for continued FERC review of Western's rates as an important and vital complement to Western's authority to raise rates on an interim basis as it deems necessary.

COLORADO RIVER ENERGY DISTRIBUTORS ASSOCIATION MEMBERS

Arizona Municipal Power Users Association

Arizona Power Authority

Arizona Power Pooling Association

City of Farmington, New Mexico

City of Truth or Consequences, New Mexico

Colorado Association of Municipal Utilities

Colorado River Commission of Nevada

Intermountain Consumer Power Association

Irrigation and Electric Districts Association of Arizona

Navajo Tribal Utility Authority

Plains Electric Generation and Transmission Cooperative, Inc.

Platte River Power Authority

City of Provo, Utah

Salt River Project

Strawberry Water Users Association

Tri-State Generation and Transmission Association, Inc.

Wyoming Municipal Power Agency

DOE/FERC REVIEW PROCEDURE FOR PMA RATES

WHEREAS, representatives of the Department of Energy have recently proposed, in a draft memorandum of understanding and delegation order dated January 7, 1983, to alter certain currently applicable ratesetting procedures for federal power marketing administrations, except the Bonneville Power Administration, to restrict the Federal Energy Regulatory Commission to determine only whether federal power rates are high enough to recover the federal government's cost of producing and transmitting power, but not whether they are too high, and

WHEREAS, the American Public Power Association has been asked for its views on DOE's proposal;

NOW, THEREFORE, BE IT RESOLVED: that the American Public Power Association supports DOE's proposal on condition that it be amended to provide for the following:

1. That the DOE have authority to propose and unilaterally place into effect on an interim basis, subject to refund with interest at rates set by DOE, such rates for the sale of federal power as it deems are required by law (hereinafter "Interim Rates");
2. That DOE certify that its Interim Rates are sufficient, but no more than sufficient under applicable law, and file such Interim Rates with the FERC;
3. That the FERC accept the DOE's Interim Rates for filing, provide notice thereof to all interested parties and, in the absence of timely protests, promptly confirm and approve such Interim Rates on a final basis without change;
4. That, in the event interested parties protest the Interim Rates, the FERC shall exercise its traditional "confirmation and approval" authority to investigate and review such Interim Rates, but only to the extent of issues raised before DOE during DOE's public comment process or issues arising after such process by action of DOE officials, and that FERC may take such action thereon as it deems appropriate, including the ordering of refunds of amounts collected in excess of the rate approved and confirmed on a final basis;
5. That "best efforts" time deadlines be established for expeditious FERC disposition of contested Interim Rates;
6. That the foregoing principles apply to any rate remanded to DOE and thereafter resubmitted to FERC.

RESOLUTION NO. H-3

FROM: Power and Water Resources Committee
APPROVED BY: Resolutions Committee

SUBJECT: Department of Energy/Federal Energy Regulatory Commission Review Procedure for Power Marketing Agency Rates

NRECA supports DOE's proposal on review procedure for PMA rates on the condition that it be amended to provide for the following:

1. That the DOE have authority to propose and unilaterally place into effect on the interim basis subject to refund with interest at rates set by DOE, such rates for the sale of federal power as it deems are required by law (hereinafter "Interim Rates").

2. That DOE certify that its Interim Rates are sufficient, but no more than sufficient, under applicable law, and file such Interim Rates with the FERC.

3. That the FERC accept the DOE's Interim Rates for filing, provide notice thereof to all interested parties and, in the absence of timely protests, promptly confirm and approve such Interim Rates on a final basis without change.

4. That, in the event interested parties protest the Interim Rates, the FERC shall exercise its traditional "confirmation and approval" authority to investigate and review such Interim Rates, but only to the extent of issues raised before DOE during DOE's public comment process or issues arising after such process by action of DOE officials, and that FERC may take such action thereon as it deems appropriate, including the ordering of refunds of amounts collected in excess of the rate approved and confirmed on a final basis.

5. That "best efforts" time deadlines be established for expeditious FERC disposition of contested Interim Rates.

6. That the foregoing principles apply to any rate remanded to DOE and thereafter resubmitted to FERC.

SUBCOMMITTEE RECESS

Senator BURDICK. This subcommittee will be in recess until 2 o'clock this afternoon.

[Whereupon, at 11:15 a.m., the subcommittee recessed, to reconvene at 2 p.m. the same day.]

(AFTERNOON SESSION, 2 P.M., THURSDAY, MARCH 24, 1983)

NONDEPARTMENTAL WITNESSES

COLUMBIA DAM, TENN.

Senator SASSER [presiding]. The subcommittee will come to order.

I am delighted to welcome today my constituents from Columbia, Tenn. They are here to testify again this year on behalf of the Columbia Dam, and I must say that they have been very faithful in their trips up here over the years in support of this very worthwhile project. I look forward to hearing the testimony, but before beginning that I want to make just a brief statement on this matter of the Columbia Dam.

I would like the record to show that my concerns about the Columbia Dam are predicated not only on the fact that this project is in my home State, but also based on my concern that there needs to be a thoughtful and careful evaluation of our approach to national water policies, and delays of the magnitude that we have witnessed associated with the construction of this dam, the Columbia Dam, simply cannot and should not be tolerated.

PROJECT HISTORY

This project was first approved by Congress in 1969, over 13 years ago. The Columbia Dam, as many of us know in this room, of course, was part of a two-dam project, called the Duck River project, and that included the Normandy Dam, also in Tennessee.

Since construction began, this project has been the subject of very frustrating and, I think, very unnecessary delays.

As I have said before, these delays represent a breach of faith with the people of the areas. This is the only project I am aware of in the history of the TVA, where the local community has been required to contribute over $16 million toward this project for water supply.

For the past 11 years, every family has been paying 5 cents for every 1,000 gallons of water they use. These funds have been paid into a trust fund to pay for the Columbia Dam.

But although the local people have held up their end of the bargain for 11 years, this project remains uncompleted and the benefits denied.

Now, I could make a very long speech about the Columbia Dam, and I have done that in years past, but I won't do it today. This has been a very frustrating situation for me personally and for other Members of our congressional delegation, and for many citizens of the area that would be served by the Columbia Dam.

I want to address just two more points very quickly.

BENEFIT-COST ISSUE

First, it has recently been reported in the press that the TVA has indicated that the benefit-cost ratio of this project, if it were recalculated, would be below unity.

Well, every water project that comes before this committee is justified on the basis of economic data available at the time the project is first approved.

We never pretended that we had a crystal ball, that we could look into the future and predict with absolute precision what the economic situation might be at the time of the conclusion of a project.

The Duck River project was an economic project when it was justified to the Congress or it would never have been initiated. And certainly costs have gone up very, very substantially since 1969. This project has been subjected to general inflation costs, and also to costs going up occasioned by an undue and unecessary delay.

Now, the structure itself is substantially completed. The project has been held up through various tactics and various efforts to utilize the environmental regulations. I think it was simply to kill the whole project.

So, the position of this committee, of the U.S. Senate, is clear on this issue. This project was authorized before I ever came to the Senate in 1977. We have appropriated money for this project and I voted to appropriate money for this project. It is a project I think that makes sense even economically now, and certainly back in 1969 it made sense when the project was first conceived by the Congress.

If the costs have gone up during this 13-year period, it has been because of delays and dilatory tactics of those who have opposed this project. And for them now to come in and say, "Well, the benefit-cost ratio just does not measure up" certainly has a very hollow ring to me.

Some of my distinguished lawyer friends in this audience will recollect a doctrine called equitable estoppel, and those who set in motion a chain of events in not a very fair and straightforward fashion should not come in and raise the end result of those chain of results as a defense for their own wrongdoing.

I think the doctrine of equitable estoppel could be applied to this project with regard to some of the opponents.

Second, I want to make it clear to the Tennessee Valley Authority, the Department of the Interior, the Corps of Engineers, the Environmental Protection Agency, whoever is running that Agency today, and to the Tennessee Water Quality Division, that this committee is going to closely monitor the status of the mussel protection plan.

This is really the only problem now in completing the project. Our committee report last year directed the agencies that I have just mentioned to expedite the mussel protection plan, and this committee of the U.S. Senate that funds these agencies that I just talked about, the full Appropriations Committee now, we expect these agencies to comply with our directions.

So, I want to ask my friends here from Columbia, to keep me informed on the status of the mussel protection plan, and I want to assure the agencies involved that we are going to monitor very carefully to make sure that they comply with the directive of this committee.

Well, having said that, we have got quite a bit of business this afternoon. First, we want to hear from the proponents of the Columbia Dam project, and then following that we will hear testimony from others regarding various water resource programs and projects.

I want to welcome first today Mr. MacFarland, Mr. Ross, and Judge Taylor Rayburn. Mr. MacFarland, for the purpose of the record, would you kindly introduce everybody with you so that we can get their full names.

STATEMENT OF LON P. MACFARLAND, REPRESENTING THE UPPER DUCK RIVER DEVELOPMENT AGENCY, THE UPPER DUCK RIVER AGENCY, AND THE UPER DUCK RIVER PLANNING COMMISSION

INTRODUCTION OF SUPPORTING WITNESSES

Mr. MACFARLAND. We have filed a list of all people here, there are about 25 people, and I understand the committee is pressed for time, we have representatives from the State legislature, Mr. Napia, and commissioners from Columbia and from the city of Lewisburg. The list has been furnished for the record along with the prepared statement we have filed.

We understand you are pressed for time, and I will try to be brief.

If I may proceed.

Senator SASSER. By all means, please.

Mr. MACFARLAND. I represent the Upper Duck River Development Association and four counties of Bedford, Coffee, Marshall, and Maury.

ENDANGERED SPECIES ISSUE

I will try to condense my statements and I will start out on the mussel problem and how we stand at the present time.

I am sure that—it is my view and the view of many people that the environmental laws have done much to improve the environmental situation in this country. But it is equally true, Senator, that abuse of those regulations have been very expensive and have cost untold money and delays of products.

For example, the snail darter problem cost—I have heard as high as $30 million.

Now the snail darter has invaded Georgia, Alabama, and Tennessee, and has been found in six different rivers. The same thing that—and it is being delisted—and the same thing applied to mussels. The mussels have delayed the Columbia Dam; it is a subspecies of the pearl wing mussel of more than 50 species there. Now, TVA tells me they have located the mussels in a lot of other areas, and they assured me that progress is being made and that this should be solved by the end of the summer.

These people that you spoke about have used these environmental regulations that the public is so confused they feel that there is a hopeless tangle and that the Government is incapable of acting. Landowners whose land is in the general area and designated don't know what to do and the whole general public is confused. They don't see why, with the number of hearings, the number of decisions—there have been hearings in these suits, they have not won a single one, they have not won an administrative hearing, they made all kinds of accusations, but they have never been able to be proved in court.

As you stated, Congress first authorized this project in 1969. The project is now about 75-percent plus complete. I have provided the clerk with pictures of the Columbia Dam. The dam structure is in place, all it needs to be done is fill in the spillway, to purchase the remaining land, and complete the project.

Little has been done in the last 3 years in this project because of unnecessary delays. So far on Normandy about $37,393,000 has been spent, and on Columbia in excess of $70 million. It could have been completed with not much more than that, except for the delays.

This project is environmentally and economically sound.

In regard to the benefit-cost ratio, I have given that a good deal of study and if they benefit all escalating at the same ratio as the cost escalated—and there is no valid reason why it could not be—this project would have a positive cost-benefit ratio.

In addition to that, in connection with recreation, that at the Normandy project has been more than four times what was originally contemplated at the time the project was first conceived and reported.

Attacks were made on the project, but they have not been able to prove it.

Our situation in that regard is that at present, in the four counties involved, there is an unemployment rate of 18.3 percent. In Maury County, it is 23.3 percent. This is a project, which if the funding is provided, that work could begin immediately, and it is one that everything else has been done.

We realize the budget constraints and the need to dampen inflation. The Government and the people have a substantial investment in this project. The people agreed, as you said, to contribute a nickel for every 1,000 gallons of water. There is $3,886,000 in the fund, the first payment is due in 1986, and with the income it has, well, we will well be able to meet that payment and subsequent payments as they come due.

We appreciate greatly your support and the support of this committee. We will keep you informed. There is no valid reason why this project cannot go ahead. It is economically and environmentally sound, and we urge that appropriations be made to continue the project which has many benefits, including flood control, water supply, and improved water quality, which had been worked on since 1950.

It has benefits for flood control on the Tennessee and Mississippi Rivers, and we feel like it is reasonable, and we are breaking a good breech of faith if this project is not completed.

Thank you.

Senator SASSER. Thank you, Mr. MacFarland.

Before hearing from Mr. Ross——

Mr. Ross. I just want to endorse this and also mention that the people in this area, the property owners, have been, we think, mistreated because they are in the condition where they don't know what to do. They cannot make long-range plans. If this project were accelerated toward its completion, these people would be able to sell their lands and reinvest their funds, and this within itself would be a stimulus to the economy.

Senator SASSER. Well, thank you, very much, Mr. Ross. I don't know of any other project we deal with here before this subcommittee that seems to enjoy as much popular support as this particular project does.

Every year we have a very large contingent that comes up here from Colombia, paying their own way to come up here, and by your presence demonstrates your support for this project, and I want to again repledge my efforts to do everything we can to move this project through to completion just as rapidly as we can.

Yes, this is a time of frugality as far as the budget is concerned; yes, we are concerned about the budget deficits; and, yes, we do need to cut back in some areas, but this is a project in which we have enormous investment already in place, and we won't fully realize the investment until the project is completed. My view is that to keep faith with the people of this area, we simply have got to press just as rapidly as we can to bring this project through to a conclusion. And I want to express my appreciation to all of you who come up here and support this project so diligently, including you, Judge Rayburn, you are here every time, and we appreciate your coming.

We are going to watch it very closely and continue to monitor and press it just as vigorously as we can.

Thank you, very much.

[The statement follows:]

STATEMENT OF LON P. MACFARLAND, UPPER DUCK RIVER DEVELOPMENT ASSOCIATION AND UPPER DUCK RIVER AGENCY

My name is Lon P. MacFarland. I am Legal Counsel for the Upper Duck River Development Agency and Association, in which post I have served for many years without fee. I speak for these organizations. The Agency is an official State Agency created to further this project. The Association is a citizen's organization representing some 130,000 people of Bedford, Coffee, Marshall and Maury Counties of Tennessee through which the Duck River flows on its way to the Tennessee River.

We have appeared before your Committee on other years, and we appreciate the interest and helpfulness of this Committee and the Congress in support of the Duck River Project (Columbia and Normandy Dams and Reservoirs, Planning Report No. 65-100-1). This Project has met with the enthusiastic approval and support of the people of the area affected. On their behalf, we thank you. This is the people's project, a very necessary one, and is the key to the development of the area since it will provide flood control, improve water quality, expand recreational facilities, afford a very necessary water supply, increase and enhance job opportunities in the area, and improve the human environment.

The Project has always had the wholehearted support of local governmental agencies, Tennessee General Assembly, the Conservation Commissioner, Governor Alexander and prior governors of the State, Senators Sasser and Baker, Congressmen Gore and Cooper, former Congressman Robin Beard, and, we feel, of the Tennessee Delegation. The Project has long had the support of the Honorable Joe L. Evins, distinguished former member of Congress and one of Tennessee's most respected public servants, who is well known to your Committee. Local governmental units, the Association and the Agency have requested that the Columbia Dam be named the Joe L. Evins Dam.

The people of the area have shown their almost unanimous support of the project by appearances at public hearings, the hearings before your Committee and by their willingness to make substantial contributions to the Project.

HISTORY

Shortly after the approval of this Project in 1969, the Office of Management and Budget insisted on applying the Federal Water Resource Act provisions as used in western projects to TVA projects. As a result, there was negotiated a contract between the Upper Duck River Development Agency, TVA and the five cities in the area that have water facility and distribution plants. This contract obligated the Agency and water systems to pay to TVA and the United States Government $16,200,000 as a local contribution for water supply. To accomplish this, the users of water in the five water systems were charged $.05 for every 1,000 gallons of water used beginning in 1972; and these funds have been paid into a trust fund for repayment of the obligation. This fund now amounts to over $3,818,886. Payments are on schedule, and there seems little doubt that the Agency will pay to TVA the first payment of $5,700,000 due under the contract in 1986 (ten years after the closing of the Normandy Dam) and the balance of $10,500,000 when due. The people of the area feel that they have a contract for the completion of this project, that they have performed and are performing their obligations; and that the failure to complete the Project would be an unpardonable breach of faith.

Exaggerated claims made by some few persons opposing the Project have not been proven in hearings before state and federal agencies or courts. The Project is an environmentally sound one and will substantially improve the human environment of the area by providing improved water quality, an adequate and pure water supply, economic development, and a much needed flood control as well as aiding flood control on the Tennessee and Mississippi Rivers, and improving recreation. Since the early 1950's, the Tennessee Department of Public Health, Water Quality Division, or its predecessors, citizens in the area and TVA have worked on and developed a Duck River basin plan, the key to which is the present two-dam project, to provide flow augmentation and improved water quality. Nothwithstanding this, several environmental organizations with membership generally outside the area have claimed superior knowledge and have used environmental laws and regulations adopted since the original approval of the Project, such as NEPA, the Endangered Species Act, the Federal Water Quality Control Act and the requirements of the Corps of Engineers that a 404 permit be obtained in an attempt to stop or delay this Project. These attacks have been unsuccessful. The federal courts have held that TVA has complied with NEPA. The Commissioner of Health and the State of Tennessee Water Quality Division have held, after lengthy hearings, that the Project does not violate water quality; and the Corps of Engineers has issued a 404 permit conditioned only on a satisfactory transplant of a subspecies of mussel.

The listing of the snail darter as endangered in the TVA Tellico Project resulted in unnecessary increases in the costs estimated to have been more than $30,000,000. Now snail darters have been found in numerous other streams, and the snail darter is being delisted. Likewise, the listing of mussels in the Duck River has delayed the Project by years and escalated the costs. The situation in this regard now is that TVA has transplanted the listed mussels into several streams, and there is every indication from TVA that the mussel problem will be solved by the end of this summer, and TVA is confident that the Fish & Wildlife Division of the Department of Interior will be able to certify the success of the program, thereby removing any remaining condition of the 404 permit which was granted by the Corps of Engineers.

It is generally recognized that environmental laws and regulations, in many instances, have improved the environment. It is also generally recognized that unreasonable use and abuse of environmental regulations have been extremely costly and have delayed and escalated the costs of this worthwhile project. Delays which have occurred in the Duck River Project have resulted from the abuse of environmental laws and regulations. Except for this, we should be here today inviting you to the celebration of the completion of the Duck River Project rather than requesting more funds to complete the Project. The delays have escalated the costs, and the persons and organizations responsible for these delays and increased costs bear a great responsibility, but, unfortunately, no financial responsibility.

Such actions and delays have confused the public and caused citizens to believe that there is a hopeless tangle in government regulations. The citizens do not understand why this Project that has been approved and on which there have been so many hearings should be subjected to such unreasonable delays, and their desires and needs thwarted. We were delighted to read of the recent action of the Congress in reducing unnecessary regulations and thereby reducing cost. Landowners in the proposed Columbia lake area whose land has been designated as a part of the lake but not yet purchased have been patient, but are in utter confusion as to what to do. In the purchase of land so far, TVA has had to resort to condemnation in only a few cases.

Congress approved the original planning report and began appropriating funds in 1969. It has directed that the Project be completed by 1985. The entire Project is approximately 75% complete. The Normandy Dam and Reservoir was completed in 1976, and is now providing water supply and improved water quality for the towns of Tullahoma, Manchester and Shelbyville. It has aided flood control and improved recreation. The concrete structure of the Columbia Dam was completed in 1981. (I have provided photographs of the structure as it now stands.) More than 12,000 acres of the 26,000 acres of land needed have been purchased and cleared. There remains the construction of a dirt fill adjacent to the concrete structure to allow closure. Bridge and pipeline relocation and the purchase of approximately 14,000 more acres of land remain to be accomplished.

Little was done on the Project in 1980 to date because of pending litigation and because of the conditions in the 404 Corps of Engineer Permit requiring successful transplant of mussels. The cost of the Normandy Dam and Reservoir was $37,393,000. So far, approximately $70,182,000 have been spent on the Columbia Dam and Reservoir. Expeditious completion of the Project makes economic sense and is in the public interest. The Project will be of great benefit to the area, the State, and will contribute to flood control on the Tennessee and Mississippi Rivers. I have provided to the Committee statements of the Managers of the Columbia, Tullahoma, Manchester, Shelbyville and Lewisburg Water Systems which clearly show that the completion of the Columbia Dam is vital to the future supply needs of Marshall and Maury Counties. These statements show that without the completion of the Columbia Dam the area could experience a severe water shortage should droughts occur again in the magnitude of the 1980-81 droughts.

Attacks have been made on the Project, claiming that the cost/benefit ratio is inadequate. We are advised by TVA that there has been no official cost/benefit study other than the study which justified the whole Project in 1969. We know that costs have escalated for the reasons given. We feel that if benefits are calculated to increase as costs have increased, that the whole Project will not be shown to have an inadequate cost/benefit ratio. The testimony in hearings has shown that recreation use at Normandy is several times that originally estimated. This Committee's studies have shown that the funds invested in water projects have returned more than the amount of the investment. We understand that the National Water Research Group will testify before this Committee today. There is no doubt that with the growing population the development of water projects is a good investment.

I have provided the Committee with information showing that in the four-county region the current unemployment rate is 18.2% of the total labor force, and in Maury County this figure is 23.3%. An appropriation for the completion of the Columbia Dam could substantially alleviate this unemployment and improve the economic situation and provide opportunity for industrial development. A substantial number of people could be put to work almost immediately.

We realize present budget constraints, and we appreciate the need to further dampen inflation. The government and the people already have a substantial investment in this Project, and we believe it would be unwise to delay or fail to complete it. TVA believes it has the capabilities to use $40,000,000 in the fiscal year on this Project. We urge the continued funding of the Project and will be grateful for whatever recommendations this Committee sees fit to make so that this Project can be completed and its benefits realized by the area and the country.

Respectfully submitted,

[redacted]

Lon P. MacFarland

WITNESS LIST
UPPER DUCK RIVER DEVELOPMENT AGENCY & ASSOCIATION
APPEARING BEFORE ENERGY & WATER DEVELOPMENT SUBCOMMITTEE ON APPROPRIATIONS

Mr. Lon MacFarland, (Spokesman), Columbia	Attorney
Mr. Claybourne Ross, Shelbyville	Executive Secretary U.D.R.D.A.
Mr. Bill Chaffin, Columbia	Secretary, C. of C.
Judge Taylor Rayburn, Columbia	
Mrs. Taylor Rayburn, Columbia	Housewife
Mr. Sam Kennedy, Columbia	Publisher
Ms. Margaret Dean Akin, Columbia	Commissioner
Mr. J. B. Erwin, Columbia	Commissioner
Mr. Billy Benefield, Columbia	Commissioner
Ms. Barbara Butler, Columbia	Businesswoman
Mr. Ray Davis, Columbia	Commissioner
Mr. Ralph Maddux, Columbia	Businessman
Mayor James Bailey, Columbia	
Mr. Norman Carpenter, Columbia	Vice Mayor
Mr. Marshall Ledbetter, Columbia	Businessman
Mrs. Allen Coppedge, Columbia	Housewife
Mr. Needham Coppedge, Columbia	Businessman
Mr. Rob Coppedge, Columbia	Student
Mr. Arnold Lilly, Lewisburg	Councilman
Mr. Gary Middleton, Lewisburg	Councilman

LETTER FROM WILLIAM M. CARROLL, GENERAL MANAGER, COLUMBIA (TENN.) WATER SYSTEM

March 9, 1983

Mr. Claiborne Ross
Upper Duck River Development Association
215 Riverview
Shelbyville, TN 37160

Dear Mr. Ross:

As Manager of the Columbia Water System, I would like to solicit your continued assistance in obtaining the completion of the remaining part of the Duck River Project, the Columbia Dam.

This project is vital to the future water supply needs of Columbia and Maury County. Columbia Water System is the largest producer-distributor of potable water drawing from the Duck River, and as such we are very concerned about future water supply and the quality of the water available to our area. As surely as future economic growth guarantees increased demand for water, a lack of an adequate water supply guarantees a lack of economic growth. The Duck River Project has been questioned again and again as to its environmental soundness and as to the quality of water impounded by the project's two reservoirs. There have been no successful arguments against the quality of these waters; all necessary and applicable permits have been granted. Since the Normandy Dam was closed, the Columbia Water System has experienced a reduction in the amount of treatment chemicals required to process Duck River water - evidence of better water quality since the dam's closing.

As environmental and water quality questions have been settled, the remaining question revolves around water supply. The drought of 1981 stands as evidence as to how close this area came to experiencing a water shortage. I've enclosed a summary of the 1981 drought and its effect upon the water of Duck River.

In closing, Mr. Ross, I believe that the construction of the Columbia Dam is a necessary, even vital step toward the sound economic health of this area. I urge you and the Upper Duck River Development Association to continue your work in obtaining the completion of the Duck River Project. Please contact me if I can be of help in these efforts.

Very truly yours,

COLUMBIA WATER SYSTEM

William M. Carroll

William M. Carroll
General Manager

During 1981, the Duck River Basin experienced a prolonged drought. Fortunately, Normandy Reservoir was available and was used to meet the demand for water supply to this area. The lowest seven day average inflow into Normandy Reservoir was 40 cubic feet per second. The lowest seven day average flow on record was 7.7 CFS. This drought obviously was not as bad as it could have been. How well did Normandy do in meeting this situation? The answer depends upon how closely you look. Maximum demand for water by municipal and industrial users looked like this:

Columbia	15.5 cubic feet per second (CFS)	
Shelbyville	5.6 CFS	
Lewisburg	4.3 CFS	
Total Municipal	25.4 CFS	
Hooker Chemical Co.	19.0 CFS	
Spontex	.8 CFS	
Monsanto Chemical Co.	22.0 CFS	
	41.8 CFS	
Total Demand for Water		67.2 cubic feet per second

During the drought of 1981, TVA maintained an average discharge from Normandy of 150 CFS. Most tributaries of Duck River were dry during this drought, so the discharge from Normandy comprised all the available water supply. TVA's own Planning Report No. 65-100-1, "The Duck River Project", states that the minimum acceptable flow downstream from Columbia is 155 CFS. This flow is needed to maintain acceptable water quality. Charting the supply of and demand for water shows:

Released from Normandy	150.	CFS
Less municipal demand	- 25.4	CFS
Less evaporation and transpiration	- 10.	CFS
Available flow downstream from Columbia	119.6	CFS
Less industrial demand	41.8	CFS
Downstream flow	77.8	CFS

Obviously, Normandy did not properly meet the demand for water during the 1981 drought. All users had the water they needed, but the river water quality suffered from the low flows. We came very close to having water shortages since Normandy never approached its normal operating level of 875' during the course of the drought. From February 3, 1981, until January 3, 1982, the highest water level was 863.1, some twelve feet below normal. Normal winter level is 859'. Normandy fell below that level on September 1, 1981, and stayed low until January 3, 1982. Its lowest point was 853.14' on November 25, 1981. TVA officials would not publicly state what they admitted privately. At one point, they estimated Normandy's remaining life at merely "a few weeks". Rains came finally at the end of November, 1981, and slowly the lake has returned to normal operating levels.

What about the next drought? Municipal demand for water will continue to grow; by 1990, the three systems mentioned earlier expect combined maximum demand of 43 CFS. Everyone hopes that industrial demand for water will grow, also. It will not, unless there is a firm, guaranteed water supply already in existance. Any serious industrial prospect will make a water supply analysis similar to the one we have made and will realize that the area lacks a guaranteed supply of water.

The Columbia Dam is vital to the area to assure a firm, readily available supply of water for municipal, industrial, recreational, and water quality needs.

LETTER FROM EUGENE D. CROWELL, MANAGER, SHELBYVILLE (TENN.) WATER SYSTEM

March 10, 1983

Mr. Claybourne Ross, Director
Upper Duck River Development Agency
County Courthouse
Shelbyville, Tennessee 37160

Dear Mr. Ross:

In answer to the inquiry as to the benefits the Shelbyville Water System would receive if Columbia Dam is completed, I wish to point out the following items.

1. The water supply was drastically affected by the droughts of 1980 and 1981. The release from Normandy Dam was salvation for the Shelbyville Water System, since Duck River is our only source of raw water.

2. In 1980-81 the Normandy reservoir was drawn down to a very critical level to supply Shelbyville, Lewisburg and Columbia with raw water. Since this drought, we now have Manchester and Tullahoma water supply to consider. We feel the reservoir must maintain a higher level since their water is supplied from the reservoir. Therefore, the release of water could not be to the level it was in 1980-81.

3. The benefits Shelbyville will receive when Columbia Dam is impounded would include the fact that Normandy Lake could maintain a higher level to supply Tullahoma and Manchester. The release to provide Shelbyville water could be less because Lewisburg and Columbia would be taking water from the Columbia impoundment.

4. TVA would have more flexibility to discharge at a level to assure the best quality of water possible from Normandy Dam for a raw water supply. The Shelbyville Water System feels very strongly that the quality of drinking water should be first priority, and the temperature for a trout stream should be second. This would aid this system in water treatment and treatment costs.

5. The five cities mentioned above are under contract with TVA and the Federal Government to build the Columbia-Normandy Project. The amount to be contributed toward the project now seems small. The cities have worked hard for the project's completion. Therefore, the agencies that have allowed the delay have caused the increased cost of the project - not the cities.

6. The Shelbyville Water System feels the completion of Columbia Dam is very important and should be implemented without further delay.

Mr. Ross, I appreciate this opportunity to express my feelings and my belief in the project. If I can be of further assistance, please feel free to contact me.

Very truly yours,
SHELBYVILLE WATER SYSTEM

Eugene D. Crowell

LETTER FROM E. RAY FARLEY, SUPERINTENDENT, LEWISBURG (TENN.) WATER AND SEWER DEPARTMENT

February 16, 1983

Mr. Claybourne Ross, Director
Upper Duck River Development Agency
County Courthouse
Shelbyville, Tennessee 37064

Dear Claybourne,

In answer to your inquiry as to Lewisburg's need for completion of the Columbia Dam, I wish to bring up the following points.

1. The drouths of 1980 and 1981 proved the dependence of this section of Tennessee on surface water. The release from Normandy appeared to be the only reason we in Lewisburg and Marshall County were not short. Had 1981 been as dry as 1980, Normandy would have been almost out of impoundment. Lewisburg's Intake on Duck River, and its Water Plant furnish water to the entire county through sales to the various Utility Districts.

There are still sections of the County that do not have wells back to pre-1980 production. Several times through the years I have pointed out Geological studies which show this entire area as having underlying groundwater capable of suppling no more that 50 gallons per minute through wells. The foresight of our governing officials in the late 1960's and early 1970's have been proven correct with the "short" drouth just experienced.

2. The Columbia impoundment, in addition to holding a sizeable water supply reserve, will act as a diluting pool for algal growth and other pollutants which may come down the slow-running Duck in times of low rainfall. Such dilution will aid in water treatment and treatment cost.

3. Please refer back to the contract between Federal Government and Local Government whereby the citizens of this area contribute toward the cost of the Columbia-Normandy project. At the time of the Contract, this was a sizeable portion of the projected costs. Subsequent delaying activities have allowed the 1970's inflation to drive costs up, so the contribution is not as high a percentage as originally expected. However, other area benefits have risen in value because of the same inflation, I still cannot understand why a contract is not the binding instrument between Federal and Local Governments that it is in civil affairs. Changing of rules, regulations, conditions, etc., do not change the obligations in Civil contracts, do they?

The night is always darkest before the dawn. Perhaps now is the time this project can be subjected to the light of reason and be completed!

Sincerely,

E Ray Farley

E. Ray Farley
Superintendent

LETTER FROM WILLIAM V. CHAFIN, JR., EXECUTIVE DIRECTOR, MAURY COUNTY (TENN.) CHAMBER OF COMMERCE

March 11, 1983

Mr. Lon P. MacFarland
P. O. Box 1121
Columbia, Tennessee 38401

Dear Mr. MacFarland:

In answer to your question regarding current unemployment rates, the latest figures we have are for January, 1983. In Maury County we show 4,990 people, 23.3% of our labor force, out of work. Marshall County's rate is 14.4% representing 1,440 jobless. When you combine the four county Upper Duck region, the rate is 18.2% of the total labor force, or 11,680 people.

If you need further data, please call on us.

Very truly yours,

Bill

William V. Chafin, [illegible]

LETTER FROM ERNEST F. MOORE, MANAGER, MANCHESTER (TENN.) WATER AND SEWER DEPARTMENT

February 17, 1983

Mr. Claybourne Ross
Executive Director
Upper Duck River Development Agency
215 Riverview Blvd.
Shelbyville, TN 37160

Dear Mr. Ross:

This is to re-affirm the support of The Manchester Water and Sewer Commission relative to your Agency's actions to develop a plentiful and high quality water source for this region.

Manchester receives its water supply from the Little Duck River, this water is satisfactory in all respects and meets all state water quality requirements. Again, we wish to express our appreciation for the work of your Agency in attempting to insure that this region has a bountiful supply of high quality water.

Very truly yours,

Ernest F. Moore
Manager

Letter From Bob G. Burton, General Manager, Tullahoma (Tenn.) Utilities Board

February 10, 1983

Mr. Clayborn Ross
215 Riverview Building
Shelbyville, Tennessee 37160

Dear Mr. Ross:

This is in response to your inquiry about the Tullahoma Water System's water supply. The Water System obtains 100% of its water from the Normandy Reservoir. All of the water for the Tullahoma System has been obtained from Normandy since September 1981.

The treated water from the Normandy Reservoir meets all Tennessee Department of Public Health drinking water standards. As you know, the water is monitored constantly to assure compliance with applicable regulations.

Very truly yours,

BOARD OF PUBLIC UTILITIES

Bob G. Burton

Bob G. Burton, General Manager

FEDERAL WATER RESOURCE DEVELOPMENT PROGRAMS

STATEMENT OF JOSEPH TOFANI, PRESIDENT, WATER RESOURCES CONGRESS

Senator SASSER. Our next witness is Mr. Joseph Tofani, president of the Water Resources Congress.

Mr. TOFANI. Thank you, Mr. Chairman.

In view of the time constraints, I would only ask that our prepared statement appear in the record and thank the subcommittee for its past support.

Senator SASSER. Thank you, Mr. Tofani. We are aware of your work in the area of water resource development.

Again, thank you for your understanding of our time situation. Your full statement will be made part of the record.

[The statement follows:]

STATEMENT OF B. JOSEPH TOFANI, PRESIDENT, WATER RESOURCES CONGRESS

Mr. Chairman and Members of the Subcommittee:

The Water Resources Congress appreciates the opportunity to present its views concerning the necessary funding, development and management of our Nation's water resources.

I am B. Joseph Tofani, President of the Water Resources Congress.

The Water Resources Congress is a nationwide organization dedicated to the wise use and proper management of our water resources. We are an umbrella organization that is concerned with every drop of water, no matter what its use or origin may be. Our members not only seek the solution of a specific water problem in a specific geographical region, but we participate on a national basis in all water uses. We strive for an accommodation of uses so that all interests may be served effectively and efficiently.

We are concerned that so few Americans are paying attention to water. Many take for granted that there is a sufficient supply of water, but fail to take into account that it is not always at the right place and at the right time. Our water supply is finite but uses for water continue to grow each day as our population grows and new demands for water are developed.

Concerning Fiscal Year 1984 appropriations, we are aware of the need to balance the budget in the coming years and the need to curb high interest rates and inflation. We also know that the temptation is great to cut water resources programs, but in defense of the water resources program, it can be factually demonstrated that the program is a gilt-edge investment in water and land resources of our nation. Dams, reservoirs, navigable channels, inland and coastal harbors and irrigation projects have paid and are paying big dividends to our Nation's economy.

Yet the water program has been going steadily down hill for many years. It has been many years since we have had new project authorizations and new construction starts. We hope that this trend can soon be reversed.

Another problem we must face is that some of our water projects are getting old and we must embark on a major program of rehabilitation. As an example, consider that only about one-third of the 225 locks and dams built by the Corps of Engineers are less than 25 years old. Another third are over 50 years old. Some of the structures over 50 are in urgent need of attention. In addition, maintenance and operation costs of our present projects are increasing each day for one reason or another. I understand that the 1984 Corps of Engineers' budget, the request for operation and maintenance, for the first time exceeds the construction request.

As a national organization, it is not our policy to single out specific projects for adequate funding. Our member organizations will be presenting testimony on these projects. However, we would like to stress that projects underway should be completed as expeditiously as possible in order that we may obtain the benefits for which they are being constructed.

I would like to say a few words as to the reasons our water program has reached its present state. First cost sharing: a consensus can not be agreed as to proper division of costs between the Federal Government and other interested parties so that new projects can be authorized and funded. Second, many believe that there is such a large backlog of projects that additional projects should not be authorized.

With regard to the backlog, I testified on July 16, 1982 before the Subcommittee on Water Resources of the House Committee on Public Works and Transportation that a large backlog of needed and desired projects did not exist. I analyzed the back-log of the Corps of Engineers and found that a number of the projects carried in the back-log which have been started will never be completed for one reason or another and a large number of projects will never be built as they were authorized many years ago and many changes have taken place since their authorization. I would like to submit to the Subcommittee a copy of that testimony for its review.

With regard to cost-sharing, we have been told for sometime that the beneficaries and other non-Federal interests should pay much more of the costs of water resources projects.

As we all know, for over a century and one half, the Federal Government has assumed the primary responsibility for our nation's water resources program. In recent years a great many proposals have been discussed by various interests but none have been adopted so the program slowly but surely is coming to a halt.

I for one do not believe that the non-Federal interests should or can assume responsibility for the water program overnight. Any substantial funding from the non-Federal sector must be phased in over a period of time and with assistance from the Federal Government

Recently, the Executive Branch, thru the Secretary of the Interior and not the Water Resources Council or the Cabinet Council on Environment and Public Works, which is composed of the Secretaries responsible for our water resources program, has requested "ideas and suggestions" from the states and the interested public on the issue of cost-sharing. I would like to submit to the Subcommittee a copy of our response for its information.

Permit me to make several points on the proposal put forth by the Secretary of the Interior. First it is not solely his responsibility; second, the request is several years too late. The request should have been solicited when the Cabinet Council initiated its study in cost-sharing so the views of the interested parties could be considered. Third, I do not believe a cost-sharing policy should be developed in a piece meal fashion. Last year, the Department of the Army submitted to Congress two proposals, one for ports and one for inland waterways. The Department of Transportation submitted a proposal on Coast Guard Services. We should have a total overall cost-sharing policy for non-Federal interests to consider, so that they can determine ways and means to raise the necessary funds and set priorities to meet their requirements. As the cost-sharing controversy drags on, the water program is going down the tube.

Finally, we would like to offer a suggestion on the topic of cost-sharing. We believe that in order that all responsible and interested parties, the Administration, Congress, states, local and private parties may participate in the development and implementation of a policy and the required legislation, a commission or board somewhat similar to the National Commission on Social Security should be established.

As we all are well aware, all the members of the Social Security Commission did not agree in every recommendation developed, however it appears that the Commission recommandations are acceptable to the Administration, Congress and the general public.

I believe that the only solution to developing an acceptable cost-sharing program is to have all interested parties fully participate in formulation of a program so that the water resources program can get back on track.

There is no doubt that a water crisis will have a greater impact on our nation than the energy crisis has generated. We survived the energy crisis because we were able to import foreign energy at a great cost and sacrifice to our nation and the world. There is no way we can import foreign water.

We must find ways and means to continue to develop, maintain and manage our water resources or we will become a second rate nation.

Thank you for your time.

TESTIMONY OF B. JOSEPH TOFANI BEFORE THE SUBCOMMITTEE ON WATER RESOURCES OF THE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

Mr. Chairman and Members of the Subcommittee:

The Water Resources Congress appreciates the opportunity to present its views concerning the authorization of projects for the proper development and management of our nation's water resources.

I am B. Joseph Tofani, President of the Water Resources Congress.

The Water Resources Congress is a nationwide organization dedicated to the wise use and proper management of our water resources. We are an umbrella organization that is concerned with every drop of water, no matter what its use or origin may be. Our members not only seek the solution of a specific water problem in a specific geographical region, but we participate on a national basis in all water uses. We strive for an accommodation of uses so that all interests may be served effectively and efficiently.

We are concerned that so few Americans are paying attention to water. Many take for granted that there is a sufficient supply of water, but fail to take into account that it is not always at the right place and at the right time. Our water supply is finite but uses for water continue to grow each day as our population grows and new demands for water are developed.

We are disturbed that there exists in the minds of some a great deal of confusion between needed water resources projects and the old familiar strains that all water projects are "pork barrel". We are especially concerned over the attitude of those who oppose water resources development and we find it difficult to understand their position in view of the fact that water projects must be developed if we are to survive as a prosperous nation.

Much of the opposition to water development arises from well intentioned people who do not understand the problems facing this nation in the water field.

National organizations who seem preoccupied over concerns aimed solely at the environment are not approaching our problems in any balanced fashion. They fail to realize that if we preserved the environment to the ultimate degree, there will not be sufficient water to support our people, or to enjoy all we preserved.

Water quantity, water quality, balanced development and proper management are the keynotes to our future.

As I have stated many times before, water resources development has evolved in a piecemeal fashion for over a century and a half. Accompanying every water crisis is a slight interest in water resources development which quickly fades away. This is not only true with water but in other areas as well. Take energy, for example, we have already forgotten our project independence and continue to rely on foreign sources. We have no foreign source of water.

The time has come when we must develop a water program -- a program that meets our needs. But I am afraid we are several years late in starting in this direction. However, we must start.

The water program has been going steadily down hill for many years. We hope that this trend will soon be reversed. It has been many years since the Army Corps of Engineers has had an authorization bill, and few, if any, new construction starts.

As a national organization, it is not possible to address the specific projects that our members have an interest. However, our members will present testimony or statements on individual projects.

I would like to address one issue, the issue of the large backlog of projects that are already authorized to be constructed by the Army Corps of Engineers.

I am sure the members of this subcommittee have heard by those who oppose the authorization of projects on which studies have been completed in recent years that the backlog is so tremendous that no new authorization bill is needed. They keep repeating over and over that there exists a backlog of $20 billion and $30 billion.

Let us analyze this backlog. First, the backlog includes $9.5 billion to complete the projects that are included in the Fiscal Year 1983 budget. This amount includes an inflation factor. Another $2.5 billion on projects that some funds have been expended but for one reason or another are not being continued. These included portions of projects that are not needed or desired at this time. So there is a total of $12 billion for projects which are well under way or not needed to be completed. I do not believe that the $12 billion in any way constitutes a part of the backlog of projects that is waiting the initiation of construction.

Another $11 billion is the estimated cost of projects on which construction has not yet started. Of this amount, $2.5 billion is for construction cost of projects on which engineering and design is under way and included in the Fiscal Year 1983 budget. Another $2.5 billion is the amount required to construct projects that have the necessary plans to initiate construction. The remaining $6 billion is the estimated cost of projects on which there has been no engineering and design or for some reason or other engineering and design has been stopped. Most of these projects were authorized some years ago before NEPA, endangered species act, clean water act and other legislation that will affect the construction of these projects. Therefore, I am sure all of these projects will not be constructed and I would venture a guess that another amount of between $4-5 billion can be deducted from the $11 billion.

It appears to me that the backlog as is being reported is misleading.

As we all know, priorities change with changing conditions and requirements. We are also aware that guidelines and ground rules in the Federal interest in water development is changing. The last Administration and the present Administration have tried, or are trying, to make changes. Congress, sooner or later, must participate in the process. The Executive and Legislative Branches working together must tackle the problem of the Federal interest in water development. I am convinced that whatever the ground rules, a number of the authorized projects will not be built for many reasons including changing economic conditions, changes in population patterns, industrial growth, lack of interest on the part of local sponsors, environmental considerations, cost sharing and others.

In the meantime, awaiting the reduction of a so-called backlog that is not too tremendous is a deterent to the authorization and construction of many worthwhile projects. The recently completed studies more accurately reflect our present and future need than projects that have been on the books for many years.

As you know, Section 12 of the 1974 Public Works Act as modified by the 1976 Act provides a mechanism to deauthorize a project. I believe the legislation has done some good but it could be improved. The legislation provides that Federal departments, agencies and instrumentalities and the governor of the state, senators of the state, members in whose district the project is located shall express views as to whether the project should be deauthorized. I believe the legislation should provide a category for projects that public officials believe will be needed in the future and should not be deauthorized and they should not be part of any active backlog.

The Corps of Engineers in the early 1950's established a system of project classification in an attempt to separate projects. It established three categories: Active, Deferred for Restudy and Inactive. I think the system worked well but I believe it has the same problem as Section 12 in that the projects cannot be recommended to be removed from the backlog unless agreed to by the same officials as under Section 12. Again, I believe these projects should be carried in a separate category and not in the backlog.

In conclusion, I believe we need an authorization bill to authorize those projects that are so urgently needed. Further, I believe that the method now used to deauthorize projects and classify projects should be reviewed so that the backlog is more realistic. Based on my analysis and a change in classification of some projects would reduce the so-called tremendous backlog of projects significantly.

We need an authorization bill soon so that projects can be authorized and constructed to meet our present and future water requirements. Thank you.

LETTER FROM B. JOSEPH TOFANI

March 14, 1983

Director, Office of Water Policy
U.S. Department of the Interior
Washington, D. C. 20240

Dear Sirs:

The notice in the Federal Register of February 1, 1983, signed by James G. Watt, Secretary of Interior, states that the Administration is considering a new policy of Federal water project cost-sharing and that the Department of the Interior seeks ideas and suggestions from the interested public on the issue.

The Water Resources Congress (WRC) is the oldest national water organization dedicated to the best use of America's natural resources. Being national in scope, its activities and interests encompass the diverse sectional, regional and functional water interests. It provides a forum where the many water needs can be molded into a national program of water development and environmental protection in the interest of progress.

We note that the Administration is considering a new Federal project cost-sharing policy and that the Department of the Interior seeks ideas and suggestions from the interested public on the issue. It was our understanding that the establishment of Federal water policy, principles and standards, cost sharing and other functions was the responsibility of the Water Resources Council which was established in 1965.

The present Administration presented testimony led by the Secretary of the Interior to the Congress that the Water Resources Council was ineffective and its functions were being assumed by the Cabinet Council on Natural Resources and Environment. The Administration also opposed the establishment of a Water Policy Board for the same reason.

Testimony also presented to the Congress by Administration officials was that the Office of Water Policy in the Department of the Interior would be an arm of the Secretary to coordinate policy within the Department. If that is the function of the Office of Water Policy, the question arises: When is the Cabinet Council going to seek input from the interested public on the issue of cost-sharing? Water resources development, conservation and management is the responsibility of several Federal Agencies and all should participate.

It is our understanding that a Task Force of the Cabinet has for about two years been working on a Federal cost-sharing policy. It would be reasonable to assume that after two years, the Task Force had developed a tentative cost-sharing policy that could be released for comment. During the last session of Congress, the Department of the Army submitted proposals on cost-sharing for ports and inland waterways, and the Department of Transportation submitted a proposal on cost-sharing for Coast Guard services. Further innovative financing (cost-sharing) has been submitted to Congress for several proposed new construction starts. One must conclude that some sort of a cost-sharing policy has been developed but not released. It is imperative that a total cost-sharing policy must be forthcoming soon if non-Federal interests are to be prepared to participate in the development, operation, maintenance and management of water projects.

Turning to the notice in the Federal Register, there is no substance in the notice which one can make any meaningful and intelligent comments. The request is very brief, "The Department of Interior seeks ideas and suggestions from the interested public on the issue." We believe that such a request should have been made prior to the initiation of the work of the Task Force.

However, we offer the following general comments. The Federal Government has assumed the primary responsibilities for water development for over a century and-a-half. We understand that the present administration would like to turn over the major responsibility to non-Federal interests. In order that non-Federal interests can participate, the Administration must phase in a cost-sharing program over a period of years. This is necessary as we have stated that priorities must be established and ways and means of funding the projects must be developed. Secondly, up-front financing for new construction starts will kill the program. Thirdly, construction and operation and maintenance should have different methods of cost-recovery. Fourthly, the most important factor is to establish a cost-recovery program that is reasonable and saleable or our water program will go down the tube.

There is no doubt that a water crisis will have a greater impact on our nation than the energy crisis has generated. We survived the energy crisis because we were able to import foreign energy at a great cost and sacrifice to our nation and the world. There is no way we can import foreign water.

We would like to offer a suggestion on the subject of cost recovery. We believe in order that non-Federal interests and the Congress may have an input, a Commission should be established somewhat similar to the National Commission on Social Security which developed a program not agreed to in all the details by all of the participants, but was acceptable to the majority of the Commission, the Administration and the Congress. It also appears that it will be a saleable product. Working together, we could also produce a saleable water resources cost-recovery program by working through the Commission.

If the Water Resources Congress can be of any assistance to you, please feel free to call on us.

Sincerely,

B Joseph Tofani

B. Joseph Tofani
President

Senator SASSER. I am going to have to suspend here. I have a telephone call from the leadership I will have to take, and I will be right back.

[A brief recess was taken.]

Senator SASSER. Our next witness is Mr. Joseph Lema, the president of transportation for the National Coal Association.

INLAND WATERWAY SYSTEM IMPROVEMENTS

STATEMENT OF JOSEPH E. LEMA, VICE PRESIDENT FOR TRANSPORTATION, NATIONAL COAL ASSOCIATION

Mr. LEMA. I am chairman of the National Coal Association. It represents coal producers and other organizations affiliated with America's coal industry.

I am joined today by Mr. Carter Manasco. He was our government affairs representative from 1941 to 1949.

Mr. Chairman, the National Coal Association through the years has sought safe, reliable, efficient, and reasonably priced transportation for the movement of coal. My objective here today is to inform the committee about water transportation needs and the urgency of moving forward with certain capital improvement on the inland waterway system.

The inland waterways last year, in 1982, carried from 140 to 150 million tons of coal. We project that by the mid-1990's, this volume will increase to about 250 million tons, an annual increase of some two-thirds over the present volume of water-borne coal tract.

We believe that water carrier transportation through many decades has provided effective competition with the railroads and has provided efficient transportation for America's reasonably priced and secure source of energy—coal.

We know, for instance, today that water carriers generally charge less than 1 cent per ton-mile, less than 1 penny for moving 1 ton of coal 1 mile on the water, compared with some 2.5 cents to 4 cents per ton-mile by railroad.

We realize, of course, we don't have navigable rivers across the country, but it is obvious that a 3-to-1 ratio, that where we have rivers they should be utilized to the fullest.

We have problems on the inland waterway systems today. They are sound, by and large. There are a few points on that inland waterway systems that must be corrected, a few problem locations, six, if you will.

We have identified on five waterways—the Ohio River, the Monongahela River, the Black Warrior River, the Kanawha River, and the upper Mississippi River above St. Louis—six installations of locks where navigation is delayed and capacity for movement of bulk commodities, including coal, is constrained quite seriously today.

When we increase that annual volume of water-borne coal transportation from 150 million tons per year this year to about 250 million tons by the mid-1990's, those constraints would become advocated.

Our problem is that every day of delay a total of—and it is a 10-person crew delayed—$5,000 to $6,000 is lost. Those $5,000 to $6,000 have to be paid ultimately by the consumer of America's coal, whether it is the consumer of electricity or whether it is the overseas customer for America's coal.

We believe those losses amount to some 25 cents to 40 cents per ton per day of added price when the congestion occurs.

We believe, therefore, that these six locks, and I would like to enumerate them for the record: Gallipolis Lock on the Ohio River, on which 85 million tons of coal move every year; locks 7 and 8 on the Monongahela River, carrying 29 million tons of coal a year; the Oliver lock on the Black Warrior River, carrying 10 million tons of coal; the Windfield lock, which carries some 9 million tons per year; and lock and dam 26 near Alton, Ill., above St. Louis, on the Mississippi River, which carries 7 million tons a year are particular problems.

We urge this committee to consider early replacement of those obsolete, undersized lock structures.

We note that inland waterways trust fund has already accumulated $150 million, according to our estimates, that are on deposit now for that purpose, and we believe when the fuel tax reaches 10 percent per year, in 1986, that that fund will accumulate about $100 million a year.

We believe those funds should not be left to rest idly in the bank, but that they should be applied immediately to correcting problems in giving America's coal industry, coal consumers, and electric consumers the benefit of improved waterway transportation.

We have, Mr. Chairman, for the record, filed a statement that gives a lot of detail about that, and I won't read that statement.

I would simply say the urgency appearing before you this year as we did last year, is accentuated by some behavior by the Interstate Commerce Commission taken during the first quarter of 1983.

The Commission would have it that it would be reasonable in that regulatory body's mind to have coal rates, railroad coal rates, increase 15 percent each year above inflation, and that would be considered reasonable to that body.

We consider that flagrantly unreasonable, and we consider the doubling of railroad coal rates in 4 years to be totally unconscionable.

I think that underscores, along with the ICC's recent intention to exempt coal traffic from regulation, these actions of the Interstate Commerce Commission underscore the need to act promptly to be sure that the inland waterway system and commercial navigation on that system can compete, can continue to compete effectively with the railroads and take the maximum share of railroad, or of coal traffic.

In conclusion, Mr. Chairman, the National Coal Association believes that our Nation's inland waterway system has demonstrated clearly that it provides efficient and reasonably priced transportation.

We are grievously concerned about the ominous 7-year hiatus in funding critical navigation improvements.

We urge the Congress and this committee to take all necessary steps to facilitate the replacenent of these six locks on the inland waterway system by acting now to authorize an appropriate funding and enable early construction of these critical improvements.

We do appreciate very much the opportunity to appear before you and would be glad to respond to any questions.

Senator SASSER. Thank you, Mr. Lema.

I don't have questions, but I would make this observation.

As you know, these projects that you have listed here in your summary statement, none of them is authorized.

Mr. LEMA. Correct.

Senator SASSER. And I would suggest very strongly to you that in the States in which these projects are located, that the Senators be alerted that they have not been authorized and the need for them, and also the various representatives in the House of Representatives, if you have not already done so, that perhaps we could get on with some authorization.

We have a critical situation in this country; you know it as well as I do. Forty-two percent of the navigation facilities of this country's inland waterways are more than 40 years old, and we are reaching, in some areas, a crisis situation in these areas here that you have indicated. That is the case in my judgment.

So I am ready, willing, and able, but we do need some authorization along the way, and I hope you will be working on that, and I am confident that you have——

Mr. MANASCO. I want to say, about the citizens tying up the projects, certain locks and dams, and Route 66, cost taxpayers 40 percent more than it costs to rebuild it.

Then we do the thing of paying the court cost out of the attorney's fees to sue us. That is the most hopeless circumstance and I hope to God you can correct it.

Senator SASSER. I think we are all concerned about the environment and we all want to protect it, but the laws that were passed to protect the environment are being used, really, to stop projects, not so much to protect the so-called endangered species, but to derail and delay projects that the Congress has authorized and appropriated funds for, and the people of the area want, projects that have favorable cost-benefit ratios and projects that are needed, and I well remember, when I first came to the Senate and the snail darter was the cause celebre here, and there was a lot of hope.

But, anyway, old farmers from east Tennessee came to see me about various matters, or I would be up in the mountain and they would say, "Senator, that snail darter we read about in the paper, I have some in my creek."

So, now, that the dam is completed and we suddenly find that there are snails everywhere.

Mr. MANASCO. We have mussels in every stream in Alabama.

Senator SASSER. Now, it is going to be a national pest.

Anyway, I say that by way of agreement with you.

Mr. LEMA. May I say in the Senate Coal Caucus, somebody was contacted with regard to the authorizing legislation that we recognize is very important. I think we will have some movement early this year in that regard.

We appreciate, though, that you have taken the time and your subcommittee, to hear us as Chairman Tom Bevill did this morning.

We think it is very important that all the authorizing and appropriating committees hear the story, and we appreciate that.

Thank you.

Senator SASSER. Thank you.

[The statement follows:]

STATEMENT OF JOSEPH E. LEMA, VICE PRESIDENT FOR TRANSPORTATION, NATIONAL COAL ASSOCIATION

Mr. Chairman and Members of the Subcommittee, my name is Joseph E. Lema. I am vice president for transportation of the National Coal Association.

* * SUMMARY * *

Mr. Chairman, I am appearing before you to urge early completion of Congressional actions required to enable the construction of replacement structures and improved capacity for navigation at six installations of locks on the inland waterways system. These are:

- Gallipolis Locks on the Ohio River in West Virginia and Ohio;
- Gray's Landing (Lock No. 7) and Point Marion (Lock No. 8) on the Monongahela River in Pennsylvania;
- Oliver Lock on the Black Warrior River in Alabama;
- Winfield Lock on the Kanawha River in West Virginia;
- addition of a second lock chamber at Lock and Dam No. 26 on the Mississippi River at Alton, Illinois in Missouri and Illinois.

These six installations of locks on the Ohio, Monongahela, Black Warrior, Kanawha and Mississippi Rivers are key locations controlling the overall efficiency of the inland waterways system. In 1980, according to the U.S. Army Corps of Engineers, about 85 million tons of coal moved on the Ohio River, 29 million tons on the Monongahela River, 10 million tons on the Black Warrior River, 9 million tons on the Kanawha River, and 7 million tons on the Upper Mississippi River. This represents 45 percent of all freight tonnage carried on these segments of the inland waterways system.

These figures illustrate that coal traffic demand is substantial on these segments of the inland waterways system today and also that other waterborne traffic significantly affects their capacity, particularly with regard to constraints caused by inadequate locks. Serious traffic congestion frequently occurs at these locks, a situation which will become more aggravated as waterborne coal traffic grows in coming years. Inadequate locks must be replaced now to meet coal traffic demand expected to be one-third greater by 1990 and two-thirds greater by 1995.

Mr. Chairman, the coal industry believes that these locks must be replaced without further delay to avert substantial losses. For instance, $5,000 to $6,000 per day is lost when loaded barges, towboats and crews are delayed due to inadequate capacity of lock chambers and equipment utilized in lockage operations. We cannot afford to suffer continued inefficiencies attributable to obsolete, undersized locks at a few locations, impairing the overall effectiveness of an otherwise sound inland waterways system and its role as a major component of our nation's total freight transportation network.

For many decades inland waterways have been utilized heavily for safe, efficient and reliable transportation of coal and other bulk commodities essential for continued viality of our nation's commerce and industry and for national security.

The five waterways which I identified earlier -- the Ohio, Monongahela, Black Warrior, Kanawha, and Mississippi Rivers -- now are moving 140 to 150 million tons of coal yearly. One in every five tons of coal produced annually is transported on inland waterways for part of shipments from mines to electric utility and industrial plants and to Gulf Coast ports engaged in coastal and international coal trade.

Annual coal production is forecast to increase from 820 million tons in 1982 to a level more than one-third higher by 1990, and more than two-thirds higher by 1995, compared with last year. Therefore, even if the share of total coal transportation remains unchanged in future years, the coal traffic demand on the inland waterways system can be expected to grow from today's volume of 140 to 150 million tons annually to a yearly volume of 250 million tons by the mid-1990s.

It is considered very reasonable to anticipate that the waterborne share of coal traffic will grow beyond today's level so that as much as one in every four tons of coal produced annually is carried on the inland waterway system, 25 percent greater than the current situation. This would increase to a substantial degree the additional coal traffic demand which can be expected on the waterways simply by virtue of projected growth in coal production without changes in the waterways share of total coal transportation.

The waterways share is likely to expand in view of rapidly rising rail rates for coal traffic, a factor which makes water transportation more attractive than ever before. On a ton-mile basis, railroad transportation rates for coal traffic on the average are much higher than water transportation rates. Railroad coal rates generally range between 2.5 cents to 4.0 cents per ton-mile compared with less than 1.0 cent per ton-mile for water transportation.

Thus, at today's rates water transportation has a great price advantage over railroad transportation. In the previous four years railroad rates for coal traffic have increased 58 percent according to data furnished by the Bureau of Labor Statistics Producer Price Index -- an alarming trend, and a situation which underscores the importance of seeking full utilization of the inland waterways to move coal in competition, and intermodally in conjunction, with the railroads.

Two recent actions of the Interstate Commerce Commission (ICC) with regard to railroad regulation underscore the importance of having water carrier competition with the railroads for the movement of coal. On February 24, 1983, the ICC served a decision in Ex Parte No. 347 (Sub-No. 1), coal rate guidelines, in which the Commission proposes to allow railroad coal rates to increase 15 percent per year above inflation, a situation which easily could cause existing rates to double in four to five years.

Then, on March 3, the ICC announced its decision to exempt from regulation railroad movements of export coal under Ex Parte No. 346 (Sub-No. 7). Obviously, this poses a serious threat by allowing unconstrained pricing and discrimination in coal shipments destined for export. Given this threat, coupled with difficulty encountered in obtaining balanced regulatory decisions, it is considered vital to provide to the maximum possible degree competition with the railroads furnished by water carriers. Such competition would be facilitated by replacement of lock structures at six locations mentioned previously.

The Ohio River and its Upper Ohio Basin tributaries, particularly the Monongahela and the Kanawha Rivers, together with the Mississippi and the Warrior Rivers, are especially important for movement of coal produced in the eastern, central and western coal-producing states. Even though navigable waterways in some instances are well outside of the immediate area in which coal is mined, the advantages furnished by water transportation cause coal shipments originated by other transport modes, including railroads, to be carried to inland ports and transloaded onto barges to realize the benefits of water transportation.

As the demand for America's coal grows here and in the world market, water transportation, as noted earlier, will have an increasingly important role in providing basic transportation capacity as well as viable competition with the railroads for the movement of coal. The railroads now carry about 550 million tons of coal per year, and they too will be called upon to provide substantially higher amounts of transportation service required to ship coal from mines to domestic destinations and to deep-draft ports in the years ahead.

Both water and rail carriers have the capability of providing effective coal transportation service by virtue of state-of-the-art technology in water and rail transportation systems. Railroad unit-trains carry 10 to 15 thousand tons of coal per train-set, and barge-tows typically carry 20 to 25 thousand tons of coal per movement, and as much as 60 thousand tons per movement on the Lower Mississippi River. Thus, their proven efficiencies and the associated economies of scale due to large volume characteristics of water and rail shipments make water and rail carriers competitive where navigable waterways exist. The National Coal Association considers such competition for the movement of coal to be a critical factor in keeping delivered prices of coal reasonable, thereby enabling America's coal to capture a full share of the market for energy in the U.S. and overseas.

A seven-year lapse in funding and authorization of inland waterways improvements, coupled with age, limited size, and deteriorating conditions of several locks and dam installations, has caused unsafe conditions and has produced some serious traffic delays and congestion, reducing the efficiency of waterways transportation. Obviously, these are deterrents to full and complete utilization of the inland waterways system and have grave consequences in lessened competitiveness of water carriers with the railroads in the future if we do not act now to upgrade certain locks and dam installations.

The average age of the 184 principal locks and dam installations is now 40 years, and some have been in service more than 70 years. Without needed replacement and rehabilitation of inadequate and deteriorated locks and dam installations, preliminary findings of the National Waterways Study indicate that projected traffic at a number of installations will reach or exceed their practical capacity in the 1980s and the 1990s.

Stagnation in authorization and funding how characterized by an ominous Congressional hiatus in action on inland waterways improvement legislation must not be permitted to last any longer if we are to preserve the strategic soundness of the inland waterways system and its availability as the demand for competitive, cost-effective, energy-efficient transportation of bulk commodities grows in future years.

Some important funding that should be utilized in a timely manner to upgrade the system as intended under provisions of the Inland Waterways Revenue Act of 1978 exists in the Inland Waterways Trust Fund. Receipts to the trust fund are estimated to total $150 million. Its income is expected to grow by more than $100 million per year by fiscal year 1986 under present law.

There have been no appropriations from the trust fund as yet. Revenues held in the trust fund, we believe, should be utilized for critical navigation projects on inland waterways. Needs are known, project justifications have been demonstrated, now engineering, design and construction should be placed on an expedited schedule so that the benefits attributable to critical inprovement projects are not lost because of inability to use the trust fund in an effective manner.

In conclusion, Mr. Chairman, we believe that our nation's inland waterways system has demonstrated clearly its importance to the vitality of commerce and industry and to national security. The inland waterways can play an even broader role in meeting long-haul freight transportation demand if we act now to replace a few inadequate locks so the inherent efficiency of the total system can be utilized effectively and to the fullest. We urge you to facilitate their replacement by acting now to enable early construction of these critical navigation improvements.

COLUMBIA BASIN PROJECT

STATEMENTS OF:

THOMAS LYDA, EXECUTIVE DIRECTOR, COLUMBIA BASIN DEVELOPMENT LEAGUE

LLOYD OTTEM, PRESIDENT, EAST COLUMBIA BASIN IRRIGATION DISTRICT

Senator SASSER. Our next witness is Thomas Lyda, an executive director of the Columbia Basin Development League.

We welcome you and ask that you summarize your testimony, and ask that you identify your associate and yourself for the purpose of the record.

Mr. LYDA. Thank you, Senator.

I am Thomas Lyda from Columbia Basin Development League, and also with me is Lloyd K. Ottem.

Today we are here to support the fiscal year 1984 budget for the Bureau of Reclamation for the Columbia Basin project in the amount of $55,760,000.

Columbia Basin project has a 50-year history of development beginning in 1933 with the start of construction of Grand Coulee Dam.

On the second page of my testimony is a line item detail, which I won't go into.

The sum total is $17,170,000 for the Third Powerplant completion, $38,000,590.

We have reviewed the requests of the Bureau of Reclamation and find these items to be direct project costs, and for that reason we support each line item and the total budget request.

Mr. Ottem will speak now.

Mr. OTTEM. Mr. Chairman, and members of the committee, I am Lloyd Ottem, a member of the Columbia basin irrigation project.

The board of directors of the three basin districts approve and most certainly recommend the inclusion and appropriations set forth for fiscal year 1984 budget for the East High Canal irrigation system and for the bypass land.

The continued quarterly development of the project and its one full 1 million acre potential is of utmost importance to the State of Washington.

The East High area remains one of the largest areas in the West, and in the future it can be served with available water and power. Eventual completion will prove beneficial to the Nation.

To summarize, the directors of the three districts fully support the fiscal year 1984 proposed appropriations for the Columbia basin project and respectfully request your support in approving the proposed budget.

Thank you for your continued support and the opportunity to present this testimony.

Mr. LYDA. Thank you.

Senator SASSER. Gentlemen, thank you, very much.

We appreciate your being with us today.

[The statement follows:]

STATEMENT OF THOMAS LYDA, EXECUTIVE DIRECTOR, COLUMBIA BASIN DEVELOPMENT LEAGUE

THIS TESTIMONY IS SUPPORTIVE OF THE DEPARTMENT OF INTERIOR PROGRAM
FOR THE
BUREAU OF RECLAMATION

WASHINGTON

COLUMBIA BASIN PROJECT

MAJOR ITEMS	FY 1984
IRRIGATION FACILITIES:	
Grand Coulee Pumping/Generating Plant Units 9, 10, 11, and 12 (Completes the installation)	$ 566,000
Block 26 Laterals	6,301,000
Fish and Wildlife Facilities	107,000
Drainage Construction	6,001,000
Deferred and Supplimental Construction	3,495,000
Deferred and Bypassed Lands	350,000
East High Canal Irrigation System	350,000
Total Irrigation Facilities	$17,170,000
Third Power Plant:	
Riverbank Stabilization Program and Cleanup Activities	$36,740,000
Switchyard Electrical Modifications	1,850,000
Total Third Powerplant	$38,590,000
Grand Total Columbia Basin Project	$55,760,000

Irrigation Facilities provides for the final testing and cleanup work on the pump/generating units, completion of Block 26 laterals, and the fsih study of Lake Roosevelt.

Work on essential drainage will continue. Preconstruction work on the deferred and bypassed lands and the East High Canal irrigation system will continue. A contract will be awarded for enlargement of a portion of the West Canal .

At the Third Powerplant the major work will be on the downstream river bank stabilization, minor completion and modification on the powerplant, and replacement of defective transformers.

All operations and maintenance work on the project will be kept on a current basis. The amounts for drainage are well advised for it will keep the lands productive and repaying for the project costs.

We have reviewed the requests with the Bureau of Reclamation and find these items to be direct project costs. For that reason we support each line item and the total budget request.

We respectfully ask for your support and approval.

Thank you for hearing us today and for your cooperation and courtesies in the past years. We are just passing the mid-point in completion of the Columbia Basin Project. Continuation of funding is essential.

STATEMENT OF LLOYD K. OTTEM, PRESIDENT, EAST COLUMBIA BASIN IRRIGATION DISTRICT

Dear Senator Hatfield:

The East Columbia Basin Irrigation District is pleased to support the President's budget for the Columbia Basin Project for F.Y. 1983.

It is gratifying to note that much of the appropriation is for completion of various projects. This budget will see the long awaited Block 26 completed, allowing farmers in that area to receive water. It will finish the testing and clean up work on the six pump/generating units so that they can go into use; it also completes the Franklin D. Roosevelt Lake Fish Study, the third power plant downstream river bank stabilization and clean up work on the third power plant itself.

The completion of these projects will help pave the way for the second half of the project. The money appropriated for enlargement of the West Canal and for pre-construction activities on the East High Canal system is a start in the direction of fulfilling the committment made by the United States and the State of Washington to the people of the Columbia Basin Project. Those farmers in the second half that became tired of waiting for water from the canal and drilled wells have just about run the course. The 125,000 acres irrigated by wells has mined the ground water to the point that the high lift, energy costs and salinity problems from sodium in the water have forced some of the operators to stop pumping operations and surely more farmers will follow this pattern in the near future. Development of the East High Canal system is the only answer to this problem and it is our sincere hope the F.Y. 1985 budget will have funds in it for starting its construction.

I am sure that we do not need to tell you that reclamation projects like the Columbia Basin are true job programs.

We appreciate the Committees support and the opportunity given us to present this testimony.

STATEMENT OF ED SPALDING, JR., PRESIDENT, BOARD OF DIRECTORS, QUINCY-COLUMBIA BASIN IRRIGATION DISTRICT

Dear Mr. Chairman and Members of the Subcommittee:

The Quincy-Columbia Basin Irrigation District welcomes this opportunity to present to your Committee its comments relating to the proposed Budget for the Columbia Basin Project for Fiscal Year 1984.

The Quincy District is one of the three irrigation districts comprising the Federal Columbia Basin Project, the other two districts being the South and East Irrigation Districts. Presently, over 550,000 acres of Project lands

are presently being irrigated by virtue of the irrigation facilities constructed by the United States under the provisions and authority of Federal reclamation laws. The majority of the irrigation facilities constructed by the United States have been transferred to the Project irrigation districts for operation and maintenance and the costs thereof are paid by the Districts.

We are pleased to note that the proposed 1984 Budget includes $566,000 for the pumpback storage units at the Grand Coulee Pumping/Generating Plant. In addition, the Directors have noted the appropriation of $38,590,000 for the Grand Coulee Dam Third Power Plant. Most certainly, these appropriations will constitute a wise investment by the United States inasmuch as the energy generated by the pumpback units and the Third Power House will help alleviate the regional power shortage and the income derived from the sale of the power will return to the United States its investment many times over.

In view of the prior investment by the United States to construct the irrigation facilities serving the Columbia Basin Project, the amounts budgeted for the 1984 Fiscal Year for drainage construction and for deferred and supplemental construction is most welcome. Supplemental and drainage construction is most necessary to preserve the integrity of the Project irrigation system so that the lands within the Project remain capable of continued irrigation during the term of the repayment contract period.

The Directors have also noted with approval the proposed appropriations for the continued construction of canals and facilities to serve Irrigation Block 26. Most of the major facilities have heretofore been constructed to bring water to Irrigation Block 26 and it is anticipated that Block 26 will be one of the most economical irrigation blocks in the Project.

The Board of Directors has also approved and most certainly recommends the inclusion of the appropriations set forth in the Fiscal Year 1984 Budget for the East High Canal irrigation system and for deferred and bypassed lands. The continued orderly development of the Columbia Basin Project to its full one million acre potential is of utmost importance to the State of Washington and its citizens. The East High area remains one of the largest and most economical areas in the West that can in the future be served with available water and power and the eventual completion of the East High area will prove beneficial to the nation.

To summarize, the Directors of the Quincy District fully support the Fiscal Year 1984 proposed appropriations for the Columbia Basin Project and respectfully request your support in approving the proposed Budget.

STATEMENT OF RUSSELL D. SMITH, SECRETARY-MANAGER, SOUTH COLUMBIA BASIN IRRIGATION DISTRICT

On behalf of the Board of Directors of the South Columbia Basin Irrigation District, I am pleased to inform you that we support the President's Budget as it relates to energy and irrigation development on the Columbia Basin Project for F.Y. 1984. We particularly support those items budgeted for:

a. The Grand Coulee Pumping and Generating Unit Nos. P/G 9, 10, 11, and 12;

b. Irrigation Block 26 Laterals;

c. Drainage Construction; and

d. Deferred and Supplemental Construction.

Irrigation Block 26 lands are owned primarily by those whose lands in other parts of the Project were found undesirable to develop or infeasible to drain and were exchanged or were allowed to purchase U. S.-owned lands in Block 26 in lieu of drainage construction. The U. S.-owned lands were either exchanged or sold with the promise that irrigation water would be available in the near future.

On behalf of the Board of Directors and the landowners of this District, I thank you for your past cooperation and courtesies and look forward to the ultimate completion of the 1,029,000-acre Columbia Basin Project as originally authorized and reauthorized by Congress almost forty-eight years ago.

MISSOURI RIVER BASIN WATER RESOURCE PROJECTS

STATEMENT OF H. E. DUVALL, PRESIDENT, MISSOURI RIVER BASIN ASSOCIATION

Senator SASSER. Our next witness is Mr. Duvall, representing the Missouri River Basin Association.

Please identify yourself for the record, and your associates, and proceed.

Mr. DUVALL. I am Gene Duvall. I am from Fort Scott, Kans. I am president of the Missouri River Basin Association.

On behalf of our association, we wish to express our appreciation for this opportunity to meet with you again concerning several very important projects in the Missouri River basin and in the area immediately surrounding that area.

We did confine our involvement to what we feel is practical, feasible from a cost standpoint. The track record we have had has justified the effort of both our associates and Congress.

With your permission, we did have around 20 people here to testify. We will cut it down and if I have your permission, I would like to start them testifying.

Senator SASSER. Very well.

Mr. DUVALL. First, Willard Becker on the Little Blue lakes and channel, Independence, Mo.

LITTLE BLUE LAKES AND CHANNEL, MISSOURI

STATEMENT OF WILLARD BECKER, SECRETARY-TREASURER, ATHERTON LEVEE DISTRICT

Mr. BECKER. I am Willard Becker. I am representing the Little Blue River Reservoir and channel project as it is in Jackson County, Mo.

We have filed with the committee statements from the mayor of Independence, Mo., Barbara Potts; from the mayor of Blue Springs, Mo., Mr. John Michael; from the Independent Chambers of Commerce, executive vice president, Mr. Sam Williamson; and a statement of Bishop Hansen of the RLDS Church. I also have a personal statement I have filed with the committee which outlines pretty much the concern which we have for continued funding of this, what we consider a very, very important project.

We believe the project is at a very critical stage at this point. The upper areas have been straightened so when the water comes, it flows more rapidly into the lower area, causing flooding, and until the reservoirs are in place, we feel that we are just sitting ducks.

We hope that your committee can find it possible to continue the excellent program which you have funded up to this point.

Thank you, very much.

Senator SASSER. Thank you, very much.

[The statements follow:]

STATEMENT OF WILLARD C. BECKER, SECRETARY-TREASURER, ATHERTON (MO.) LEVEE DISTRICT

LONGVIEW AND BLUE SPRINGS LAKES

I appreciate the opportunity to submit a statement in support of appropriations for continuing construction of the Little Blue Lakes of Longview and Blue Springs in the amount of $12 million, which is the capability of the Corps of Engineers.

In August 1982, we in the area of Atherton levee system (351-R) were again subjected to the increased runoff of the improved upper channel area which resulted in the topping and breaking of the levee, flooding over 1,000 acres of developed croplands, washing out the main line of the Santa Fe Railroad, and also caused damaging bank erosion in the lower regions of the Little Blue River. The two control lakes which are under construction are designed to prevent these kind of happenings in the lower areas of the Little Blue River. The projects, when completed, will be of tremendous value to this area of Jackson County.

I respectfully request appropriations to the capability of the Corps of Engineers to bring Longview and Blue Springs Lakes to a rapid completion.

MISSOURI RIVER LEVEE PROGRAM

I want to take this opportunity to express appreciation for the privilege of submitting a statement in support of the Missouri River levee program. This program, which is one of long standing, continues each day to give a substantial return on the investment which has been made. Our Nation's economy and environment has reaped tremendous benefits from this great program.

I respectfully request that you will find it possible to continue to appropriate funds for an orderly development of the Missouri River levee system to the capability of the Corps of Engineers.

STATEMENT OF BARBARA J. POTTS, MAYOR, INDEPENDENCE, MO.

Gentlemen, the city of Independence continues to be vitally interested in the ongoing channel improvement and flood control work on the Little Blue River in Jackson County, Mo.

Virtually all of the undeveloped land within the corporate limits of the city of Independence which is suitable for industry lies within the flood plain of the Little Blue River, and I respectfully request that funding for channel improvements and flood control be considered and continued to the Corps of Engineers capabilities.

Your favorable consideration for the continuation of these projects in the most expeditious manner is earnestly solicited.

STATEMENT OF JOHN R. MICHAEL, MAYOR, BLUE SPRINGS, MO.

Honorable committee members, on behalf of the board of aldermen of the city of Blue Springs, Mo., I submit this statement of endorsement in full support of the funding for the Little Blue River lakes project. Our city officials feel that this project is vital to the economic and industrial development of this area. We respectfully request the committee's favorable consideration of the appropriations that are needed in fiscal year 1984 for this much-needed project.

STATEMENT OF SAM WILLIAMSON, EXECUTIVE VICE PRESIDENT, INDEPENDENCE (MO.) CHAMBER OF COMMERCE

Friends, the Chamber of Commerce of the city of Independence thank you for this opportunity to submit a statement in support of the funding of the Little Blue River flood control program.

In August 1982, the city of Independence experienced for the second time in 5 years the ravages of a disastrous flood. With this experience fresh in our minds we realize what a critical issue this request which is before you is to our citizens. Recognizing with appreciation the assistance you have given us in the past, please give your careful attention to an early completion of the projects now under construction for which we all take a great deal of pride.

We respectfully request that the funds be provided to the full capability of the Corps of Engineers in this project.

STATEMENT OF FRANCIS E. HANSEN, PRESIDING BISHOPRIC, REORGANIZED CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS

Thank you for this opportunity to submit a statement in support of the plan of improvement for flood control and water resources for the Little Blue River in Jackson County, Mo.

The disastrous flood which occurred in the valley of the Little Blue River in August 1982 was a dramatic consequence of inadequate flood control. It had been the hope of the communities affected that the rainfall pattern which caused the flood would not occur until after the completion of the Little Blue River flood control program. Because of this experience we cannot emphasize strongly enough the importance of the completion of the two lakes (Longview and Blue Springs) at the earliest possible date. Your careful attention to this matter so important to the communities of the Little Blue River Valley is solicited.

The Corps of Engineers have indicated a capability for the 1984 fiscal year of $12 million for construction of the Longview and Blue Springs Lakes. We would request consideration be given to the full capability of the Corps of Engineers.

STATEMENT OF RICHARD L. BERKLEY, MAYOR, KANSAS CITY, MO.

Myron Calkins is my name. I am director of public works of Kansas City, Mo. I am speaking for and on behalf of Mayor Richard Berkley and Leon Brownfield, city councilman of Kansas City and chairman of its legislative committee, as well as for the entire city council.

First, I want to express our thanks for the excellent start—through previous appropriations—of: (1) The construction of the Blue River channel improvement project; and (2) for the funding of preliminary engineering studies for the channel improvement of Brush Creek in Kansas City, Mo. Both are extremely important projects for retaining the economic stability of our city. Even now we are still repairing facilities in those drainage areas damaged by the flood of August 1982.

The Blue River flows generally south to north to the Missouri River through a principal heavy industrial area of Kansas City. The authorized Blue River project lies wholly within our corporate limits even though the drainage area is interstate. Frequently, severe flooding occurs in the valley and for many years this vital industrial area has steadily deteriorated because of this constant threat. A flood control program to correct this situation has been authorized for many years.

Kansas City signed the local sponsor agreement in October 1979—over 3 years ago—and returned it to the Corps of Engineers for execution. Since that time, Kansas City has acquired right-of-way for the project with financial commitments in excess of $3 million and proceeded with necessary utility relocations. However, because the Corps of Engineers has previously refused to sign the agreement and proceed with the construction, the project has now been placed on a list of projects recommended for financing under a new innovative financing formula. A change to this new financing formula for this longstanding project will increase the estimated local costs from $20 million to $67 million and will effectively terminate it as local funds of this magnitude simply are not available.

This project is not only extremely important to the area's industrial base, but it is equally important at this time to the creation of jobs and the stimulation of the economy of our entire region. I am not requesting additional funds. I wish to emphasize that no new construction appropriations are required for fiscal year 1984. Prior-year appropriations are sufficient to start and continue construction over the next year. All previously required local funds have been appropriated by the city council for this phase of the construction. It is time to move ahead to complete this critically needed project. We strongly urge that this project be removed from the innovative financing list and returned to the original financing category. If this is done, the first construction contract could be underway within 90 days.

While this Blue River project is the primary concern of Kansas City, we also support the several projects both in Missouri and Kansas for which our delegation is appearing today. I appreciate the opportunity to express our opinion to you and request your support for these projects in adopting this year's budget.

STATEMENT OF LEW PARAMORE, EXECUTIVE VICE PRESIDENT EMERITUS, MISSOURI RIVER BASIN ASSOCIATION

Mr. DUVALL. Now, Mr. Paramore for the Missouri River Basin Association.

Mr. PARAMORE. I am Lew Paramore and I also represent the Topeka City Water Commissioner, who is busy campaigning for reelection and could not come.

I want to reinforce the statement suggesting that it has been my opportunity to testify before this committee for many years in support of these project, but, particularly the last 3 years I have pointed out the critical nature of our present circumstances in terms of the channel improvements and the need to get the lakes and projects in place. We are holding our breath hoping we would not get a rainstorm, but that did not last. We did receive a rain, in August of last year, that did inundate us as we were afraid that would do.

When we had the lakes placed, which they are coming along very well, but we very desperately need the continued support, because we are still vulnerable to these heavy rains.

Senator SASSER. I can sympathize with him on that.

Mr. PARAMORE. I have been the president there for over 30 years now, and I want to thank the committee, particularly for the projects they have completed in our area, which is in the Kansas City District, Army Corps of Engineers. I left with your staff a tabulation of what the cost of these projects in the Kansas City District were and how much the benefits are, and they have proven to be sound capital investments as your committee has recognized in the past.

I have submitted our estimate of the cumulative project costs and benefits for the Kansas City District of the Corps which I ask be made part of the record.

[The information follows:]

ESTIMATE OF CUMULATIVE PROJECT COSTS AND BENEFITS—KANSAS CITY DISTRICT

Summary of Project Costs thru FY 1981 (in $1,000)

Project Name	Project Costs: Total Costs	Project Costs: Federal	Project Costs: Non-Federal	O & M Costs: Total O & M	O & M Costs: Federal	O & M Costs: Non-Federal
Lakes	$1,129,590	$1,129,590	$0	$101,656	$101,656	$0
Mo. R. Levee System	34,550	31,390	3,160	1,177	0	1,177
Local Protection	125,640	102,748	22,895	12,367	0	12,367
Total Costs	$1,289,780	$1,263,728	$26,055	$115,200	$101,656	$13,544

Summary of Project Benefits thru FY 1981 (in $1,000)

Project Name	Recreation	Water Supply	Water Quality	Power	Flood Control	Total Benefits
Lakes	$203,624	$1,534	$31,595	$17,438	$625,858	$880,049
Mo. R. Levee System	0	0	0	0	50,864	50,864
Local Protection	0	0	0	0	2,241,564	2,241,564
Total Benefits	$203,624	$1,534	$31,595	$17,438	$2,918,286	$3,172,477

Flood control benefits not included above: (in $1,000)

Upper Mo. R. Lakes = $1,027,027

Bureau of Reclamation = $30,517

These tables contain costs & benefits attributable to Corps Projects in the KCD

Estimated Project Benefits thru FY 1981 (In $1,000)

Project Name	Recreation	Water Supply	Water Quality	Power	Flood Control	Other	Total Benefits
Harlan Co	$20,233	$0	$0	$0	$13,402	$	$33,635
Milford	20,291	0	0	0	83,659		103,950
Wilson	8,660	0	0	0	4,413		13,073
Kanopolis	15,039	0	0	0	31,139		46,178
Tuttle Cr.	22,272	0	19,550	0	296,998		338,820
Perry	20,291	0	0	0	133,163		153,454
Clinton	2,572	1,238	0	0	1,013		4,823
Smithville	3,540	0	0	0	10,436		13,976
Long Branch	786	229	1,482	0	408		2,905
Rathbun	15,868	0	1,441	0	13,713		31,022
Melvern	6,788	0	3,182	0	12,976		22,946
Pomona	15,875	67	5,940	0	18,305		40,187
Stockton	17,922	0	0	17,300	2,021		37,243
Pomme de Terre	31,590	0	0	0	2,224		33,814
H. S. Truman	1,897	0	0	138	1,988		4,023
Total Lakes	$203,624	$1,534	$31,595	$17,438	$625,858	$	$880,049

Project Name	Estimated Project Costs thru FY 1981 (in $1,000)					
	Project Costs			O & M Costs		
	Total Costs	Federal	Non-Federal	Total O & M	Federal	Non-Federal
Harlan Co.	47,705	47,705	0	10,950	10,950	0
Milford	49,103	49,103	0	9,186	9,186	0
Wilson	20,109	20,109	0	6,240	6,240	0
Kanopolis	12,538	12,538	0	7,262	7,262	0
Tuttle Cr.	80,377	80,377	0	9,455	9,455	0
Perry	49,040	49,040	0	8,827	8,827	0
Clinton	57,340	57,340	0	1,762	1,762	0
Smithville	86,100	86,100	0	993	993	0
Long Branch	23,100	23,100	0	691	691	0
Rathbun	27,127	27,127	0	7,216	7,216	0
Melvern	37,410	37,410	0	5,358	5,358	0
Pomona	13,997	13,997	0	7,789	7,789	0
Stockton	76,507	76,507	0	11,426	11,426	0
Pomme de Terre	17,097	17,097	0	9,489	9,489	0
H. S. Truman	532,000	532,000	0	5,012	5,012	0
Total Lake Costs	$ 1,129,590	$ 1,129,590	$ 0	$ 101,656	$ 101,656	$ 0

Project Name	Estimated Project Costs & Benefits thru FY 1981 (in $1,000)							
	Project Costs			O & M Costs			Benefits	
	Total Costs	Federal	Non-Federal	Total O & M	Federal	Non-Federal	Recreation	Flood Control
Mo. R. Levee System	$	$	$	$	$	$		$
R 513 - 512	2,223	1,939	284	106	0	106	None	4,127
R 500	439	408	31	103	0	103	"	855
L 497	1,926	1,734	192	72	0	72	"	3,296
L 488	1,553	1,497	56	114	0	114	"	4,916
R 482	1,170	1,081	89	110	0	110	"	2,657
L 476	1,617	1,520	97	114	0	114	"	3,228
R 471 - 460	3,915	3,482	433	50	0	50	"	4,790
L 455	4,742	4,270	472	61	0	61	"	4,486
L 448 - 443	2,920	2,740	180	114	0	114	"	11,625
R 440	1,652	1,567	85	110	0	110	"	3,268
L 408	6,403	5,683	720	36	0	36	"	2,828
L 400	1,183	1,073	110	89	0	89	"	2,696
R 351	3,521	3,222	299	58	0	58	"	2,092
Kimsey-Holley	1,286	1,174	112	40	0	40	"	No Record
Total MRLS	$ 34,550	$ 31,390	$ 3,160	$ 1,177	$ 0	$ 1,177	None	$ 50,864

Project Name	Estimated Project Costs & Benefits thru FY 1981 (in $1,000)							
	Project Costs			O & M Costs			Benefits	
	Total Costs	Federal	Non-Federal	Total O & M	Federal	Non-Federal	Recreation	Flood Control
Local Protection Projects	$	$	$	$	$	$		$
Kansas Citys	47,553	42,433	5,120	8,906	0	8,906	None	2,139,150
Topeka	31,558	21,175	10,383	1,573	0	1,573	"	67,505
Lawrence	10,520	8,390	2,130	358	0	358	"	4,086
Big Stranger Cr.	343	337	6	85	0	85	"	469
Stonehouse Cr.	349	247	102	34	0	34	"	30
Manhattan	2,754	2,489	265	191	0	191	"	3,229
Frankfort	1,395	1,271	124	75	0	75	"	112
Fairbury	747	727	20	9	0	9	"	280
Seward	134	127	7	25	0	25	"	2,009
Abilene	1,386	1,099	287	67	0	67	"	No Record
Salina	5,839	3,879	1,960	207	0	207	"	4,923
Barnard	161	128	33	8	0	8	"	216
Clyde	1,057	881	176	30	0	30	"	23
Bartley	128	118	10	29	0	29	"	19
Indianola	75	67	8	26	0	26	"	23
Atchison	4,365	4,100	265	26	0	26	"	No Record
Bedford	616	587	29	9	0	9	"	60
Chariton R. (1944 Act)	8,788	8,053	735	512	0	512	"	5,628
Ottawa	5,339	4,463	876	157	0	157	"	12,327
Osawatomie	2,385	2,037	348	24	0	24	"	1,375
New Haven	151	140	11	16	0	16	"	100
Total Local Protection	$ 125,640	$ 102,748	$ 22,895	$ 12,367	0	$ 12,367	None	2,241,564

EL DORADO LAKE, KANS.

STATEMENT OF DON ADLESPERGER, COMMISSIONER, EL DORADO, KANS.

Mr. DUVALL. Now, Mr. Chairman, we have Commissioner Don Adlesperger of the city of El Dorado, Kans.

Mr. ADLESPERGER. I am representing the city of El Dorado and wish to thank you for giving us this time. We have been on this project several years and you have kept us funded. We are now finishing it up and would just like a few things.

It has been several years and the cost has escalated, but we are almost done and we appreciate your funding every bit possible. Thank you.

[The statement follows:]

STATEMENT OF JOE STEPHENSON, MAYOR, EL DORADO, KANS.

We, duly elected and constituted representatives of the city of El Dorado, Kans., do hereby request and urge the U.S. Senate to increase the President's recommended budget allocation and appropriate to the full Corps of Engineers' capability for continued construction of the El Dorado Reservoir.

In 1972, the city of El Dorado entered into an agreement with the Secretary of the Army to guarantee repayment of the municipal industrial water supply in the El Dorado Reservoir. At the time, the people of El Dorado approved the contract at a special election and agreed to pay approximately 37 percent of the total cost. We urge the Congress to appropriate to the full Corps capability in order to keep the project on its timetable and to not needlessly permit the cost to escalate due to inflation.

The city of El Dorado lies in the midst of a rich agricultural cattle-raising land, surrounded by two large oil refineries, one being the largest in the State of Kansas. The health and vitality of this area is closely linked to the interest of the Nation's well being. The area, however, is alternately threatened with floods and drought, currently characteristic of the Kansas Walnut Valley basin. A devastating flood struck our area June 1979. Our request for funds today is another step in a long road of effort dating back to 1958, to secure economic stability and prosperity in our region.

Construction of the El Dorado Reservoir is now underway. The city of El Dorado urges an appropriation which will keep the project on schedule. We consider the city to be a partner with the Federal Government in this project. The local taxpayers have agreed to the contract with the Department of the Army to share in the construction cost. We week, in light of our financial interest, your utmost consideration of our request.

DOUGLASS LAKE, KANS.

STATEMENT OF JOHN PRATHER, CHAIRMAN, BUTLER COUNTY LONG RANGE PLANNING COMMITTEE, BUTLER COUNTY, KANS.

Mr. DUVALL. I would like to introduce John Prather, Butler County.

Mr. PRATHER. Good afternoon. I am here representing a number of people today that had statements reduced to writing to be turned in for the record.

The mayor of Douglas, Herman Ogg; mayor of Rose Hill, Steve Whetstine; and Butler County Commissioner J. W. Simmons.

As chairman of the Butler County Long Range Planning Committee, I speak on behalf of the Douglas Reservoir project, and first I want to point out one thing as a reference to the reservoir.

Butler County is the largest county in the State of Kansas. Over 2,400 square miles would make it larger than the State of Rhode Island; that is, the land mass we are talking about here.

The first study was somewhere around 1965 by the Corps of Engineers. Our group has identified that we are running short of water and we realize there is a long period here to get a project rolling.

What we are asking here today is if you would give consideration to updating the feasibility study done by the Corps of Engineers by adding it to the budgeting for 1984.

I would also like to mention for the record in being brief, we are represented also by Senator Dole's office, by staff member Dave Cordova, and Senator Nancy Kassebaum's office, by staff member, Georgia Ptacek.

Senator SASSER. Thank you.

[The statements follow:]

STATEMENT OF GOV. JOHN CARLIN OF KANSAS

Kansas appreciates the past role of the federal government in developing water projects which benefit our state. While I recognize fully the present economic situation, I remain convinced that sound water development, management, and conservation is a good investment, indeed, a vital investment, for our future.

Kansas is heavily involved in water resources at the state and local level and has been for some years. For example, we have contracted with the Corps of Engineers for water supply storage in nine reservoirs. Much has been accomplished by this state-federal partnership. In order for this partnership to continue effectively, I urge Congress to clearly define Federal water policy. It's hard to play the game when no one knows the rules.

Specifically, in deference to the funding difficulties common to all levels of government today, I concur in the Administration's modest requests for FY 1984 water resources work in Kansas. I do, however, ask that funds be added for planning on the Douglass Reservoir. Douglass offers significant potential for both flood control and water supply.

In summary, I urge you to favorably consider funding the proposed budget for FY 1984 in Kansas plus providing funds for planning work on Douglass Reservoir.

STATEMENT OF J. W. SIMMONS, BUTLER COUNTY (KANS.) COUNTY COMMISSIONER

The Board of County Commissioners of Butler County Kansas wish to express their complete support for the Corps of Engineers reservoir proposed to be built near Douglass, Kansas. This reservoir is ideally located east of Wichita, Kansas and near the communities of Douglass and Augusta. It encompasses a drainage area that would guarantee a high quality water supply as well as improving downstream water quality through regulated storage and discharge. Additionally, it would provide recreation benefits to this metropolitan area as well as downstream flood control to the citizens of Kansas, Oklahoma, Arkansas, Mississippi and Louisana.

We realize that good reservoir locations are difficult to find and are limited by nature. We believe this location is one that should be built in the near future for the benefit of the citizens of this country.

The project was authorized for construction by the Flood Control Act of 1965. It would provide for multiple-purpose development including flood control, water supply, and recreation. The estimated first cost is $77,000,000 based upon October 1982 price levels. Thirty-two percent of the project cost, or $24,500,000, is allocated to the water supply feature that would provide an estimated dependable yield of about 14.2 million gallons per day. The project has a benefit-to-cost ration of 1.01:1 for the interest rate of 3-¼ percent used at the time of authorization. Using the present interest rate of 7-7/8 percent, the benefit-to-cost ration is 0.61:1, or below unity which is the threshold for establishing a Federal interest in further project development.

Funds have not been appropriated since the time of authorization to perform updated economic studies and advanced engineering and design studies. Funding for that work would be expended to re-evaluate the economic merits of the project using

the current Federal planning criteria and to perform more detailed design work before construction. Based on present criteria, the water supply portion of the project benefits could increase substantially based upon changes in our economic guidelines since the time of project authorization.

If I can be of further assistance to you or your committee members you may call me at (316) 321-5056 or (316) 775-6832 or write me in care of Butler County Courthouse, El Dorado, Kansas, 67042.

STATEMENT OF ROBERT SHRYOCK, MAYOR, AUGUSTA, KANS.

I am here today to request assistance in the planning and development of Douglass Lake [illegible]e Little Walnut Creek located 6 miles South of Augusta. The need for flood control, water supply and recreation is most apparent. In 1965 a massive flood occurred in the entire Walnut Valley Watershed area. Again in 1973, 1976 & 1979, flood waters covered the entire valley and caused extensive damage. In turn the opposite extreme occurred. In 1955 through 1957, 1967 and 1981 the City's two lakes furnishing water to Augusta were completely drained due to extreme drought conditions and water was pumped 25 miles by pipeline to furnish household water to the City. This water was of very poor quality which was not beneficial to the health of the people and which also caused the replacement of many household appliances and fixtures. As for recreation there are over 400,000 persons within a 25 mile radius of this lake. This lake would help alleviate the flood problem, would supply adequate water for Augusta and other communities in Butler County and furnish recreation for a large portion of the areas residents.

Augusta has experienced Mother Nature's extremes, with overwhelming floods one year and dry, searing droughts the next. This reservoir will help lessen the full force of nature in both droughts and floods by controlling the extremes.

It is for these reasons that I request that the full capability of the United States Army Corps of Engineers be authorized for advance design and engineering for this project.

STATEMENT OF DR. HERMAN R. OGG, MAYOR, DOUGLASS, KANS.

Dear Senator Hatfield:

We are vitally aware of the need to conserve funds, reduce spending, and attempt to get our country firmly back on the road to prosperity; however, I am certain that a relatively small investment at this time can preserve and perpetuate the economy and well-being for thousands of people and also assure an environmentally sound future for coming generations. If adequate planning is not funded at this time, there is a very great possibility that a large segment of Southcentral Kansas will be completely without water within the next twenty years.

I believe that our recent experiences with water (or the lack of it) should illustrate what can happen to any community in this area in the near future unless steps are taken to correct the deficiences.

My town, the City of Douglass, was founded and settled in the 1870's and almost ceased to exist two years ago because those who had recently been in charge failed to plan ahead, and we ran out of water!

Have you ever been without water to drink, for minimum household uses, for bathing, for watering the lawns, shrubs and gardens, and for other normal family activities for an extended period of time?

Douglass is located about 30 miles from Wichita (the largest city in Kansas) and serves as a rapidly growing bed-room type community or suburb of this manufacturing and industrial city. Our city developed its present water supply system around 30 years ago. About 15 wells were drilled which provided an adequate and acceptable source for the relatively stable community; then, as time marched on, the city started to grow again, it stopped raining, and the wells started to play out. Additional wells were drilled, but two years ago, there were only eight producing wells left, and they were rapidly deteriorating!

I assumed the office of mayor in May of 1981 and found it necessary to immediately put water rationing into effect; no outside use for any purposes and only minimum uses for household use. (See attached copy of proclamation). We borrowed $100,000 and started drilling test wells for a new source of water. We finally located what appeared to be a good quantity of water after drilling eight test wells, but the water was not acceptable for public use, and the state refused to approve if for city consumption.

On July 9, 1982, we were able to connect with a pipeline to the El Dorado Reservoir about 30 miles away, and we are temporarily in satisfactory condition both for quantity and quality of water, but, we have been advised that within the next 15 to 20 years, we will no longer be able to purchase the amount considered necessary for the survival of our community because of the anticipated demand in that area.

Test wells for water have been attempted in all directions from our city, but there is no source presently acceptable for either the quantity or quality considered necessary for survival. We are not alone in this! All of the communities in this area are faced with the same catastrophic possibility unless we are considered favorably for assistance by starting the planning (and construction as soon as possible) of the proposed Douglass Reservoir on the Little Walnut River north of our city.

The immediate approval of planning funds for the full capability for advanced design by the Corps of Engineers is vital for the future existence, not only for our growing community, but also for the entire area of Southcentral Kansas.

The welfare of thousands of people and the future economic well-being of additional thousands is dependent on immediate planning for this source of water. In addition to providing a life-saving source of good water, the by-products will be invaluable for flood control plus a key area for recreational facilities and activities for both the present and future generations.

Will you please help us?

PROCLAMATION

June 2, 1981

Under the powers vested in me as Mayor of the City of Douglass and in accordance with City Ordinance #315, I hereby declare a water emergency for the City of Douglass. The following rules will be in effect immediately and until further notice.

"No one will use city water for any outside use until further notice. This means that there will be no watering of gardens, lawns, flowers, shrubs, washing cars, or other outside use of city water which could result in dangerous loss of city water pressure.

Anyone violating this decree shall be subject to the following:

1. First Offense: Citation will be issued and violator's name listed on door of city building and published in local paper.
2. Second Offense: Citation will be issued, names published, and a fine of $100.00 will be assessed against the individual, and he or she will be denied use of city water until further notice."

We are working desperately trying to get additional water sources for the city, and just as soon as possible, the above restrictions will be lifted and water supplies will be made available to the members of the community.

The car washes will continue to be open on alternating weeks for the benefit of the community.

We do appreciate your patience and cooperation. Thank you!

STATEMENT OF JOHN C. PRATHER, CHAIRMAN, BUTLER COUNTY LONG RANGE PLANNING COMMITTEE

The Butler County Long Range Planning Committee is comprised of community leaders representing all the towns in Butler County. The committee's purpose is to recognize the needs of the people in the future and to help design programs and projects to meet those needs.

Our research has shown the need for a reservoir in south Butler County to serve several purposes. The first and most important is the preservation of a natural resource for the benefit of the people in the State of Kansas and the surrounding States. Second, flood control to eliminate the potential loss of life and damage to property and crops. Third, a water source for human and industrial growth and development. Fourth, a recreational facility for the use and enjoyment of families in Kansas and the surrounding States.

Water is a valuable natural resource, and as such should be stored for the benefit of all. Toward that end, the Butler County Long Range Planning Committee recommends that funds be allocated for the development of the Douglass Reservoir project.

STATEMENT OF STEVE WHETSTINE, MAYOR, ROSE HILL, KANS.

Gentlemen, the city of Rose Hill, Kans., which is in southwest Butler County, along with the cities of Douglass and Augusta, have all experienced severe water problems over the last 5 years. There is a shortage of stored water and most ground water in this area is not fit for consumption.

The city of Rose Hill has experienced a growth rate of over 300 percent the last 7 years, which has created a great need for additional water.

The proposed Douglass Reservoir would fill a great need for water in the areas of consumption, economic development, and recreation. Therefore, the people of Rose Hill and surrounding area would like to see the Corps of Engineers be authorized and funded to start the preliminary studies and planning, with the ultimate goal of construction of the Douglass Reservoir.

HARRY S. TRUMAN DAM AND RESERVOIR, MO.

STATEMENT OF DANIEL B. MILES, MAYOR, CLINTON, MO.

Mr. DUVALL. Now we have Daniel B. Miles, mayor of the city of Clinton on the Truman Reservoir.

Mr. MILES. I would like very much to second your remarks on the Columbia Dam situation.

Truman Dam was originally authorized in 1954 under President Eisenhower, and it really did not get started with the construction until 1964. It was supposed to be completed in 1970, then 1980, and now we are going into the mid-1980's.

We experienced an environmental suit which we won in the Federal District Court of West Missoula, and the Eighth Court of Appeals in St. Louis, to the point where the environmental group which is fighting it gave up plans to go on to the Supreme Court.

Our problem has been funding, which has stretched out the schedule. Our immediate problem is the success you and your predecessor have had. It is a beautiful 55,600-acre lake with nearly 1,000 miles of shoreline. It is set in a beautiful Ozarks setting with bluffs and forests. Success has hit the tail end of the project with the public use areas.

In the last year, 1982, there were more than 2 million visitors. Without the facilities, they create their own, using four-wheel drive—I don't mean four-wheel—but vehicles that can go anyplace, whatever you call them.

And as a result, the environment to which you and all of us certainly want protected, even more damaging is our infant tourism industry there. Without the facilities, people are coming in and as I say, creating their own, and yet many of them are very disappointed, and at boat shows and other places, they tell us why are there not some places for us to go where we can boat, camp, et cetera. That is what we hoped to recoop the loss of land with, with the loss of agriculture land use.

My main point is to thank you very much for everything you have done, and also do join your plea against this cost sharing. None of our communities in the area in which the dam is located can actually come up with the money to do this, and I know you addressed this last year.

Again, thank you, very much, Senator. we have filed several supporting statements for the record.

Senator SASSER. Thank you, Mr. Miles.

[The statements follow:]

STATEMENT OF HELEN MACHNICKI, MAYOR PRO TEM, CLINTON, MO.

Gentlemen:

Thank you for the opportunity to be present today, as a representative of the Clinton, Missouri, City Council and business community, on behalf of the Harry S. Truman Dam and Reservoir Project.

Twenty-one years ago, this project was started and it is still incomplete. It has been delayed by economics, war, downstream problems and environmental objections. We have lost many acres of land, agri-business, and tax dollars to this lake, and we are unable to compensate for this loss without developed recreation areas for tourism and its related industries.

I wish to express the City of Clinton's concern and opposition to cost-sharing to complete this project. State and local governments are simply not financially able to assume this burden. The recreational facilities of this lake were promoted and promised to us. We ask that you honor this commitment with total federal funding to complete the Harry S. Truman Dam and Reservoir Project.

We appreciate the thoughtfulness, consideration and generous support you have given us in the past and would like to thank you for your continued interest in our future.

STATEMENT OF PARTIN AUSTIN, MAYOR, OSCEOLA, MO.

Gentlemen:

On behalf of the citizens of Osceola and the surrounding area, I wish to express appreciation for courtesies extended today and on previous occasions.

Recently, it came to our attention that the Corp's Civil Works Budget request did not include funds for construction or completion of public use recreation areas which were part of the Master Plan for Truman Lake. Our community is shocked by this lack of budgetary responsibility. We have been sold out because the term "recreation" has become a bad and distasteful word.

Gentlemen, we are well aware of the general state of the economy and we are in sympathy with your problems. However, the 1962 authorization by Congress of this project referred specifically to the recreation function which was integral to its intended use. Please refer to House Document 578 of 1962. These areas were planned to help offset the loss of revenue to our community resulting from land and citizenry displacement. Our city lost over 1/3 of its area, we lost 25% of our homes and about 25% of our businesses. We took this devastating blow and supported the project because of what it would do for America. We did this because we had faith in our government to keep its word to provide these areas in order that a new industry known as tourism could be developed and our severly damaged local economy could be restored.

We have waited over 20 years and it appears we'll have to wait several more. You have it in your power to restore the necessary funds in the Corp's budget and thereby fulfill the obligation made by your former colleagues. With restoration of funds, our faith in our government will also be restored.

STATEMENT OF GLEN F. TOALSON, OSAGE-SAC ASSOCIATION OF MISSOURI RIVER BASIN ASSOCIATION

Gentlemen:

As Chairman of Osage-Sac Association of the Missouri River Basin Association, I wish to express appreciation to you and your colleagues for concern and realization of the extreme importance of Water Resources.

Today marks my 25th trip to Washington in support of Water Projects; my 15th consecutive appearance before your committee. Specifically, I'm here today to support the earliest possible completion of the Harry S. Truman project and the Ft. Scott project which is in eastern Kansas. There is a severe shortage of good quality water in western Missouri and eastern Kansas. Ft. Scott would not only correct this situation, but would provide flood control and many other benefits which would improve the environmant.

For FY 1984, we request funding to the Corps of Engineers' maximum capability which will provide them the means to expiditiously complete Harry S. Truman project. Our area is in dire need of returning to normalcy.

Thank you for the courtesy extended me today and in the past.

STATEMENT OF BONITA J. TOWNSEND, PRESIDENT-ELECT, CLINTON (MO.) CHAMBER OF COMMERCE

Gentlemen:

As a resident of Henry County for many years, as a business person, and as President-Elect of our Chamber of Commerce, I come before you today to express my concern about our Harry S. Truman Dam and Reservoir.

I have worked since 1979 with the Tourism Committee of the Chamber of Commerce, becoming vitally involved in the growth of our City and County. We have faced many obstacles along the way to developing our area. One of the greatest of these is when, at Travel and Boat Shows, we are asked the questions of "Why are roads not completed to these campgrounds and beaches?" "Why are there no facilities for us around the Lake?" "Why build a beautiful 55,000 acre lake and not complete the beaches, campgrounds and boat ramps roads and bathhouses?"

We come to you today, to help us find the answers to these questions.

Tourism has evolved into Missouri's second largest industry. Since 1967 annual traveler spending has risen from $773 Million to $4.5 Billion in 1982. Over 10 Million people visited Missouri's Parks and Historic Sites last year.

Because of the economy, people are taking advantage of recreation closer to home. Located one and one-half to two hours from two large metropolitan areas, Harry S. Truman Reservoir is ideally suited for these people.

Henry County's unemployment is 10.2% Development of our area means jobs of many kinds for our unemployed, a revitilization of our local economy. We are seeing the tip of the iceburg. It is of vital importance to us to see the completion of this project.

I want to express my gratitude to this committee, the Corps of Engineers, and the army of people who have worked very hard to make this project become a reality and I respectfully ask that this committee continue the full funding of this project without cost sharing, reminding you of the original commitment of the '60's to fully fund this project with Federal Funds.

Let us not falter now! We can see the final phase begun! Let us all say "Well Done" to a fruitful venture finally completed!

STATEMENT OF DAVID M. WILLIAMS, PRESIDING JUDGE, COUNTY COURT OF BENTON, MO.

The Harry S. Truman Dam and Reservoir has a FY-1984 recommended budget of some $8,000,000.00.

Officials of Benton County appreciate these budget recommendations to enable the ultimate completion of the Truman project.

We especially appreciate the inclusion of the $1.2 million for downstream protection and facilities at Warsaw and the $2.6 million for further development of the recreation areas in the Reservoir areas.

The inclusion of this $2.6 million is extremely important because it is an unfortunate fact that these areas must be funded entirely by Federal appropriations. Benton County, the City of Warsaw, and the other counties and cities in the Reservoir area are fiscally unable to provide any of these facilities on a cost sharing basis.

Whereas for the FY-1984 budget calls for $8,000,000.00 but the Corp of Engineers capability is $9,800,000.00, so if the additional $1,800,000.00 is approved it would enable the items approved for construction to be completed three months early.

Looking forward to the FY85-87 program for funding we are grateful to find $11.5 million more recommended to be provided fully by Federal appropriations. We are, by the same token, extremely disappointed that $10.4 has been unscheduled to be spent for full completion of the recreation areas unless cost sharing be provided by local governmental units. As previously pointed out the local governments in the Truman Reservoir area are absolutely unable to finance on a cost sharing basis $10.4 million of facilities.

Benton County has a 13.5% unemployment record for the month of February which is much higher than adjoining counties, if the appropriations are included this will mean more jobs for Benton County.

We, therefore, respectfully urge recommendation of $8,000,000.00, along with the additional $1,800,000.00 be included in the FY-84 budget, and that the unscheduled $10.4 million be rescheduled for inclusion in future budgets on an entirely Federal funded basis.

STATEMENT OF RON MARKEL, PRESIDENT, OSCEOLA AREA (MO.) CHAMBER OF COMMERCE

Gentlemen:

As President of the Osceola Area Chamber of Commerce, and on behalf of the merchants of our area, I want to thank you for the opportunity to appear before you today.

Our major concern today is the construction and completion of the proposed recreation and public use areas on Truman Lake. The plan of 1962 promised to develop these areas to offset the loss of revenue to our community and area due to the loss of considerable farm land, businesses, and 25% of our homes. (Please refer to House Document #578 of 1962.)

The area businesses are shocked to learn that the Corp's Civil Works Budget request has not included funds for completion of these public use areas, after years and years of promises. We feel we have suffered enough. We have watched our economy decline year by year while we wait for the original promises to come true. We are still waiting!

The only way of economic recovery for our area is the completion of the recreational areas. Only then can business and industry related to tourism be developed.

The Osceola Area Chamber of Commerce urges you to restore the funds to complete these projects.

STATEMENT OF DANIEL B. MILES, MAYOR, CLINTON, MO.

I want to thank you in behalf of the people of Clinton for your outstanding success in the Harry S. Truman Dam and Reservoir project. You and the Corps of Engineers have created a beautiful, sparkling 55,600-acre lake in a majestic Ozark bluff and forest area.

The world being what it is today, success has created a problem.

The lake is there. People are flooding to Lake Truman to use its water for recreation. It is becoming known as one of the finest bass and crappie lakes of the entire country. As a result, it had 2,153,600 recreation days of use last year, leading all 16 lakes of the Kansas City District of the U.S. Army Corps of Engineers. This is ahead of Corps' predictions for the present stage of the project's development.

The problem of such success is lack of enough public use areas to accommodate such numbers of visitors. As a result, many are creating their own use areas, damaging the beautiful environment. This lack of full development also is damaging to what the area hopes will be a tourist industry to replace farming lost to the lake.

Our plea to you today is to fully fund the Corps' capability in development of promised public use areas, both to protect the lake and to allow the area to fully develop the tourist potential.

STATEMENT OF GORDON DRAKE, MAYOR, WARSAW, MO.

Mr. DUVALL. Now, Gordon Drake.

Mr. DRAKE. Mr. Chairman, I just want to reiterate what Mayor Miles said, and in referring to the order, it was a paddle fish that they tried to stop our project over some 10 years ago or so, and this is one of the reasons we have the delays.

Last year, the House restored money for our projects, and this year there is some money in the budget. We certainly hope that this will be fulfilled and that we can get these projects finished. It has been 21 years now in construction, and our small counties and small cities are in no financial condition to cost share on the project which was originally planned.

Thank you very much.

Senator SASSER. Thank you, Mayor.

[The statement follows:]

STATEMENT OF GORDON H. DRAKE, MAYOR, WARSAW, MO.

Honorable Senators and Congressmen, the Harry S. Truman Dam and Reservoir has a fiscal year 1984 recommended budget of some $8 million. This includes $1.2 million for downstream protection and facilities at Warsaw and $2.6 million for further development of the recreation facilities (public use areas) in the reservoir area.

The citizens of Benton County and the city of Warsaw are grateful to have the $1.2 million and $2.6 million items included in the proposed budget.

Inasmuch as congressional authorization for the Truman project was under the Flood Control Act of 1962, the existing law at that time, as we understand it, provided for total funding by the Federal Government for recreational areas and facilities, as well as for the purpose of flood control, water conservation, and hydroelectric power.

Inasmuch as the land for the public use areas at the Truman Reservoir has been purchased and some of the facilities in these areas already constructed, it would appear to be the responsibility of the Federal Government to continue funding of these recreational facilities. Completion of these facilities should, in some measure, offset the loss to the economy which Benton County has experienced the past several years with the displacement of virtually all agriculture in the reservoir area for which the Truman project is directly responsible.

Furthermore, it should be pointed out that Benton County, the city of Warsaw, or the other counties and cities in the reservoir area, do not have the financial resources to provide any of these facilities on a cost-sharing basis.

We, therefore, respectfully request that the proposed $8 million be included in the fiscal year 1984 budget. We further request that future fiscal years 1985 to 1987 budgets include total Federal funding for full completion of the recreational phase of the Truman project because of the fiscal inability of local units of government to participate in funding of these facilities on a cost-sharing basis.

STATEMENT OF JERRY WILLIAMS, PRESIDENT, CLINTON CHAMBER OF COMMERCE

Mr. DUVALL. Now Jerry Williams, president of the Clinton Chamber of Commerce.

Mr. WILLIAMS. On behalf of the Clinton Chambers of Commerce, we would like to leave you a bumper sticker which says "We are hooked on Truman Lake."

Thank you again, sir.

Senator SASSER. Thank you, very much.

[The statement follows:]

STATEMENT OF JERRY WILLIAMS, PRESIDENT, CLINTON (MO.) CHAMBER OF COMMERCE

Tradeoffs and compromise seem to have become a way of life in our great country. If one should have thoughts and beliefs in the great American dream, these, too, could and do vanish forever with the swift stroke of a pen because of reorganized priorities or to fulfill some other unkept promise.

We, the people of the Harry S. Truman Dam and Reservoir area, have become the conscience of our Government and we are here, once again, to remind those who have made these commitments to fulfill these dreams and promises made some 20-odd years ago.

You have our land, which at one time provided income for our farming families and, in turn, the moneys they spent in our communities for goods and services played a large part in our day-to-day business. However, I'm not so naive to think that provisions have not been made to help our communities recoup some of our losses. In fact, a new industry has blossomed in our area.

Tourism, an infant industry which has come to our area, is seeking the proper nourishment to reach it's full maturity. This can only happen by you fulfilling those commitments providing for the total funding for completion of our public use areas. Without the funding for these areas the chances for this industry's survival will be slim and none.

Let there be no mistake about our pleas. Our communities cannot withstand the continued loss of economic growth potential of any kind. It is imperative that this funding be provided to insure the stoppage of further economic decay in our area.

Mr. DUVALL. I would also ask to have included in the record the Missouri River Basin Association's list of recommendations for appropriations. This covers all the projects we have testified on today.

[The information follows:]

RECOMMENDATIONS FOR APPROPRIATIONS BY THE MISSOURI RIVER BASIN ASSOCIATION

CORPS OF ENGINEERS PROJECTS—KANSAS CITY DISTRICT

	Fiscal year 1984—	
	Recommended budget	Requests by
Missouri River basin:		
Brush Creek		$250,000
Kansas and Osage Rivers	$400,000	400,000
Harry S. Truman Dam and Reservoir	8,000,000	9,800,000
Fort Scott Lake		
Missouri River levee system	1,100,000	1,100,000
Missouri River navigation	9,447,000	9,447,000
Little Blue River channel	3,700,000	3,700,000
Little Blue River lakes	9,900,000	12,000,000
Blue River channel		Continue
Long Branch Lake	(c)300,000	(c)300,000
Lower Grand River (levee)		(c)150,000
Platte River, Mo	80,000	(s)80,000
Wears Creek	(s)100,000	(s)100,000
Arkansas River basin:		
El Dorado Lake access road	6,800,000	6,800,000
Douglas Lake		80,000
Mississippi River basin: Cannon Dam	11,630,000	11,630,000

Mr. DUVALL. I would have difficulty going home if I did not mention the Marmaton River Association regarding Fort Scott Lake. Now it is funded to finish the studies. I hope this time next year we will be asking for money for construction. It is just a matter of getting the right blend.

We will see you next year, and those who did not testify gave you written testimony.

Senator SASSER. That is fine, Mr. DuVall. We have all the testimony here, and those that did not testify orally, and those statement will appear in the record in the appropriate place.

Mr. DUVALL. I did notice that we have Vicki Kessler of Senator Eagleton's staff here—we appreciate your coming.

Senator SASSER. Maybe she is hooked on Truman Lake too.

Mr. DUVALL. Thank you, very much, for your time.

Do you have any other questions?

I also want to mention, our executive vice president, Jim McPherson, who helped set this up.

Senator SASSER. Yes, I believe he worked with Senator Symington—we appreciate his work with the committee staff. You are sort of preaching to the choir, but we are appreciative of your coming today to again show your support for these projects.

Mr. DUVALL. Thank you for your time.

[The statements follow:]

WITNESS LIST

MISSOURI RIVER BASIN ASSOCIATION (MO-ARK)

HEARINGS BEFORE THE
ENERGY AND WATER RESOURCES
SUBCOMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE AND HOUSE OF REPRESENTATIVES

WASHINGTON, D.C. - MARCH 24, 1983

H.E. DuVall, President
Missouri River Basin Association
Ft. Scott Lake
Ft. Scott, Kansas

Bishop Willard Becker
R.L.D.S. Church
Little Blue Lakes & Channel
Independence, Missouri

Commissioner Don Adlesperger
City of El Dorado
El Dorado Lake
El Dorado, Kansas

Myron Caulkins, Public Works Dir.
City of Kansas City
Blue River Channel
Kansas City, Missouri

Steve Gates, Vice President
Missouri River Basin Association
Missouri River Levees
Missouri River Navigation
Napoleon, Missouri

Lew Paramore, Executive V-P Emeritus
Missouri River Basin Association
Kansas flood control
Topeka, Kansas

J.C. Hart, Membership Coordinator
Missouri River Basin Association
Hillsdale Lake
Gardner, Kansas

Glen Toalson
Osage-Sac Area Association
Harry S. Truman Dam & Reservoir
Osceola, Missouri

Ron Merkel
City of Osceola
Osceola Chamber of Commerce
Harry S. Truman Dam & Reservoir
Osceola, Missouri

Steve Whetstein, Mayor
City of Rose Hill
Douglass Lake
Rose Hill, Kansas

John Prather
Butler County Wholesale Water Supply Unit
Douglass Lake
El Dorado, Kansas

Gordon Drake, Mayor
City of Warsaw
Harry S. Truman Dam & Reservoir
Warsaw, Missouri

Scott Newkirk, Judge
Benton County Court
Harry S. Truman Dam & Reservoir
Warsaw, Missouri

Daniel B. Miles, Mayor
City of Clinton
Harry S. Truman Dam & Reservoir
Clinton, Missouri

Helen Machnicki, Mayor Pro-Tem
City of Clinton
Harry S. Truman Dam & Reservoir
Clinton, Missouri

Jerry Williams, President
Clinton Chamber of Commerce
Harry S. Truman Dam & Reservoir
Clinton, Missouri

Bonita Townsend, President-Elect
Clinton Chamber of Commerce
Harry S. Truman Dam & Reservoir
Clinton, Missouri

J.W. Simmons, Chairman
Butler County Commission
Douglass Lake
Augusta, Kansas

Robert Shyrock, Mayor
City of Augusta
Douglass Lake
Augusta, Kansas

Dr. Herman Ogg, Mayor
City of Douglass
Douglass Lake
Douglass, Kansas

James A. McPherson
Executive Vice President
Missouri River Basin Association
Smithville, Missouri

STATEMENT OF H. E. DUVALL, MARMATON RIVER FLOOD CONTROL AND CONSERVATION ASSOCIATION

This project—Marmaton River Reservoir (Fort Scott Lake), Bourbon County, Kans.—is one of the last remaining reservoirs of the Pick-Sloan plan passed by Congress and signed by the President into law in 1944. Portions of the Pick-Sloan plan which have been completed have already provided more benefits than the original cost. It has been shown that these projects are capital investments to enhance the security and economic strength of the Nation, and they provide jobs during and following construction.

As a result of droughts and floods over the past few years, it is apparent that the need for this reservoir is becoming even greater. Since the time that work began on the planning and engineering of this project, which is now completed, it was known that this reservoir would save a considerable amount of property each year through flood control. There were other important benefits such as downstream water flow control, improved fish and wildlife, recreational and economic benefits, and the possibility of hydroelectric generation.

However, the people in the State of Kansas and southwest Missouri have a more serious problem. Many cities and communities in the area do not have an adequate supply of water for residential and industrial use, let alone enough for future development. And more importantly, many of them are using water which does not meet the U.S. Public Health Service (1962) minimum health standards. This is borne out by geological surveys by the universities in Kansas and Missouri.

Twelve cities have asked to be considered for rights to purchase water from this impoundment. The reservoir is included in the overall water plan for the State of Kansas. Due to the size of the conservation pool and the amount of water per day that it will produce, it is a priority reservoir.

This project, at the present, is fully funded to conclude the necessary reports and complete the studies this fiscal year. When the Army Corps of Engineers completes the reports and presents a capability for construction, we trust that your committee will give full consideration to the construction start.

SUBCOMMITTEE RECESS

Senator SASSER. The subcommittee will stand in recess until 10 a.m., April 5.

[Whereupon, at 3:08 p.m. Thursday, March 24, the subcommittee was recessed to reconvene at 10 a.m., Tuesday, April 5.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1984

TUESDAY, APRIL 5, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m. in room SD–192, Dirksen Senate Office Building, Hon. J. Bennett Johnston presiding.

Present: Senators Garn, Abdnor, and Johnston.

NONDEPARTMENTAL WITNESSES

OPENING REMARKS

Senator JOHNSTON. The subcommittee will come to order.

In the absence of the chairman of the subcommittee, Senator Hatfield, I have been asked, as a member of the subcommittee, to preside over today's session. Senator Hatfield expresses his regrets that he cannot be here. However, on behalf of the chairman and the subcommittee, I want to welcome each of you to the hearing today.

We have a large number of witnesses that wish to be heard. Therefore, in accordance with our notification to each of you, it will take some real self-restraint on the part of everyone to hold oral testimony to a minimum, in order that all of you who have requested an opportunity to testify may be heard. So, in keeping with the subcommittee's wishes, I ask that the detailed prepared statement that each of you has worked out, be submitted for the record, where they will be carefully reviewed. That is the record that the subcommittee will study in determining its judgment and recommendation for the upcoming year. In that way, we will have a carefully detailed record so that anyone who is not present will be able to arrive at an independent judgment.

Then, if each witness will summarize or highlight the important points in his oral testimony, it would be most helpful.

So again, welcome, and we will now proceed with our first witnesses, who are our friends from the Port of New Orleans.

Welcome Herb, Mr. Giallanza, and Captain Meyers.

Lower Mississippi River Navigation Projects

STATEMENT OF HERBERT HAAR, EXECUTIVE PORT DIRECTOR, PORT OF NEW ORLEANS

ACCOMPANIED BY:

SAM GIALLANZA, NEW ORLEANS STEAMSHIP ASSOCIATION
DANIEL MEYERS, PRESIDENT, ASSOCIATED BRANCH PILOTS

Mr. **Haar**. Mr. Chairman, I am Herbert R. Haar, Jr., assistant director for port director of the Port of New Orleans. I am here to testify on behalf of the board of commissioners of the Port of New Orleans, a unit of local government of the State of Louisiana, on projects of vital interest to the development of Louisiana and neighboring gulf coast States, the mid-American States, and the Nation.

I have with me Mr. Sam Giallanza, vice president of the New Orleans Steamship Association, and Capt. Daniel Meyers, president of the Associated Branch Pilots.

Senator **Johnston**. It is always good to have you gentlemen with us to testify on these important projects.

Mr. **Haar**. Also, as an observer, I have Mrs. Linda Watson, who is chief of our marketing division in the Port of New Orleans.

PORT TONNAGES

In 1981, the lower Mississippi River deep-draft port area stretching from Baton Rouge and New Orleans to the gulf, handled 377 million tons of waterborne foreign and domestic cargo, excluding shallow-draft through-traffic cargo; thus, surpassing Rotterdam and establishing itself as the largest port area in the world. A closer look at the 1981 statistics for the lower Mississippi River regional port area reveals that exports and imports alone reached 183 million short tons valued at $42.2 billion—21 percent share of the Nation's total.

In grain exports alone, the port is the No. 1 exporter in the world. In 1982, these grain exports reached 2.3 billion bushels, accounting for 49 percent of the U.S. total grain exports. Continued growth and development of this port complex is essential to the national economy.

Senator **Johnston**. You say we are the largest exporter in the world?

Mr. **Haar**. The largest complex. We are the largest exporter in the United States, Mr. Chairman, but looking at Baton Rouge to the gulf, there are four public authorities, Baton Rouge and New Orleans, La., if you look at that one regional entity, that is the largest world complex. We are the largest maritime port in the world. Unfortunately, this growth is being inhibited by the lack of adequate deep-water channels—a 55-foot depth—for the larger vessels engaged in world commerce, as well as frequent occurrences in recent years of less than authorized project depths at the mouth of the Mississippi River resulting from heavy silting in Southwest Pass.

Mr. Chairman, I am just giving the highlights and I would like to have the whole statement submitted for the record.

Senator **Johnston**. Of course, your complete statements will be made part of the record.

MISSISSIPPI RIVER-GULF OUTLET, LOUISIANA

Mr. HAAR. Turning to the tidewater area in the Port of New Orleans—the portion of the port facilities that are directly connected to the Gulf of Mexico via the 76-mile Mississippi River-gulf outlet channel—there has been an average yearly growth in vessel visitation of over 6 percent during the period of 1970 to 1980. We anticipate even greater growth as new facilities are brought on line. In this essential area of the port, we estimate that approximately $500 million of public and private funds has been expended thus far.

A total of 31 percent of the Port of New Orleans general cargo passing over public facilities is handled in the tidewater (MR-GO) port area. The steady growth in ship passages and cargo tonnage is the direct result of construction of public facilities and private terminals in this area of the port. The most recent cargo statistics published by the U.S. Army Corps of Engineers report 5,541,464 tons of cargo moved through the Mississippi River-gulf outlet during 1980, of which 79 percent, 4,367,785 tons, represented foreign waterborne commerce; and 21 percent, 1,173,679 tons, represented domestic coastwise traffic.

During the current year, this channel has shoaled to 29 feet as a result of two severe storms passing through the area. This shoaling has caused vessel grounding, cargo tonnage restrictions, and increased concerns on the part of the shipping industry. We are reminded that over 11,000 employees depend upon the marine commerce that travels via the MR-GO for their livelihood. It is imperative that adequate funds for maintenance dredging be provided annually for this important waterway, which had an annual economic impact of $500 million on this area in 1981.

For these reasons, we urge that $8.48 million be appropriated by the Congress for operation and maintenance, general, Mississippi River-gulf outlet.

MISSISSIPPI RIVER—BATON ROUGE TO THE GULF

The Port of New Orleans is the No. 1 port in the Nation, with a total of foreign and domestic waterborne commerce tonnage of 190 million in 1981. The Port of Baton Rouge, located 125 miles upriver, is the fifth. Both port complexes are entirely dependent upon timely and adequate dredging of the Southwest Pass to provide access to the gulf. In only 3 years—1972, 1976, and 1977—out of the past 10 has full project depth been maintained by the Corps of Engineers at Southwest Pass for the entire high-water season. We are concerned that insufficient funds may be available for maintaining the pass and crossings, assuming from past experiences with spring thaws bringing higher river stages and higher rates of siltation. We strongly recommend that the administration's proposed budget of $26,428,000 for operation and maintenance, general, Mississippi River, Baton Rouge to the gulf, be increased to include an additional $3,572,000 for necessary dredging of crossings between Baton Rouge and New Orleans and repairs to training works in Southwest Pass. This proposed funding of $30 million is less than the Corps of Engineers' capability of $37,428,000.

SOUTHWEST PASS TRAINING STRUCTURES

Equally important on the lower Mississippi River is the need to continue the efforts in designing various structures comprising the training works of Southwest Pass. These improvements could well decrease annual maintenance costs and, therefore, we recommend that the full Corps of Engineers' capability of $800,000, construction, general, be appropriated by Congress.

MISSISSIPPI RIVER—GULF OUTLET, NEW SHIP LOCK

A new lock to connect the Mississippi River and the Mississippi River-gulf outlet has been long authorized by the Congress and is in a design status. The existing 60-year-old lock built by the Port of New Orleans and leased to the Corps of Engineers is in need of a major overhaul. This undersized lock, now providing this connection, has been carrying its peak design capacity tonnage for years with increasing delays being experienced by waterway operators transiting the lock. The Corps has estimated that tonnage demand for this lock will increase at the rate of 1 million tons per year for the next 50 years. The Governors of Alabama, Arkansas, Iowa, Louisiana, Mississippi, Oklahoma, and South Dakota have gone on record previously in strong support of this project. This project is vitally important to the future of the Port of New Orleans, the entire Mississippi River Valley, all of the gulf States, and has been classified by a former Chief of the U.S. Army Corps of Engineers as the second most important navigation project in the United States. We, accordingly, request that engineering and design effort continue and that this effort be funded as proposed in the administration's budget, an amount of $500,000, the Corps' full capability for this project, under construction, general, Mississippi River-gulf outlet.

A 55-foot channel for the lower Mississippi River from Baton Rouge to the gulf is urgently needed to service the foreign trade and commerce of mid-America which accounts for 35 percent of the population, 34 percent of the purchasing power, 41 percent of the productive industry, and 40 percent of the employment of the United States.

This is the time for expediting completion of the Mississippi River-gulf outlet enlargement, and we urge Congress to fully fund the Corps to its full capability of $2,100,000 under general investigations for completing the studies on the deepening of the Mississippi River.

I have with me Mr. Sam Giallanza, senior vice president of the New Orleans Steamship Association, and Capt. Daniel R. Meyers, Jr., president of the Associated Branch Pilots, who will file detailed statements and make brief oral statements in support of the projects that the Port of New Orleans has recommended.

I thank you and I would like now to ask, Mr. Chairman, with your permission, that Mr. Giallanza make a brief statement.

MAINTAINING AUTHORIZED CHANNEL DEPTHS

Senator JOHNSTON. Let me ask you one question, Mr. Haar. What do you think it will cost in annual maintenance costs to fully maintain the authorized depths of the Mississippi River channel?

Mr. HAAR. You mean for the deepening of the channel or for the river as now authorized?

Senator JOHNSTON. Yes, the 45 feet, authorized depth.

Mr. HAAR. On the Mississippi River—when you say 45——

Senator JOHNSTON. Fully maintaining the present authorized depth, 40 feet.

Mr. HAAR. Fully maintaining the authorized depth with no problems, I think it will take the Corps' full capability on the Mississippi River, $37,400,000.

Senator JOHNSTON. You think that will do it?

Mr. HAAR. Yes. In the spirit of the administration's and the Congress tight hold on the budget, we recommend a lesser figure even though our hearts, in our own judgment, feel that we should have the full figure, but we feel that in the spirit of compromise we try to strike the very minimal figure. I checked with the Corps and they said absolutely bottom we got to have more than what is in the administration's budget. Actually, I would personally like to see the full capability for this project.

Senator JOHNSTON. How many days a year in the past has it been maintained at the fully authorized depth?

Mr. HAAR. I think it has varied. I think some years we have had as long as 3 or 4 months when we had very high water conditions where there has been deficiency and restrictions on draft.

Senator JOHNSTON. Thank you very much.

[The statement follows:]

STATEMENT OF HERBERT R. HAAR, JR., ASSISTANT EXECUTIVE PORT DIRECTOR, PORT OF NEW ORLEANS

1. MISSISSIPPI RIVER-GULF OUTLET, LA., MAINTENANCE DREDGING

   For this project in Fiscal Year 1984, we strongly recommend that $8.48 million be appropriated by Congress under Operation and Maintenance, General. This project is presently in a very deficient maintenance state.

2. MISSISSIPPI RIVER - BATON ROUGE TO THE GULF, MAINTENANCE DREDGING AND BANK STABILIZATION

   We recommend that Congress appropriate $30 million under Operation and Maintenance, General. The additional funding of $3.572 million over the Administration's Fiscal Year 1984 Budget is for minimum essential necessary dredging and for dike and jetty repairs in Southwest Pass.

3. MISSISSIPPI RIVER - BATON ROUGE TO THE GULF, BANK NOURISHMENT

   Continued improvement of structures comprising the training works of Southwest Pass could well decrease annual maintenance costs. We recommend that the full Corps of Engineers' capability of $800,000, Construction, General, be appropriated by Congress to continue this design effort on bank nourishment, pile dikes and bulkheads.

4. MISSISSIPPI RIVER-GULF OUTLET, LA., NEW SHIP LOCK

   We recommend that Congress appropriate $500,000 under Construction, General, Fiscal Year 1984 funds, for the Corps of Engineers to continue the engineering and design effort on this valued project. This amount is the same as that proposed by the Administration and is equal to the Corps of Engineers' full capability. This project will result in hundreds of new jobs during construction and over 10,000 permanent new jobs during the life of the project after completion.

5. MISSISSIPPI RIVER-GULF OUTLET ENLARGEMENT, LA. - FIFTY-FIVE FOOT CHANNEL

   We recommend that this project be expedited in order to hasten receipt of enormous benefits that will materialize during as well as after completion of construction of this project. We recommend that Congress appropriate $2.1 million under General Investigations, an amount equal to the $2.1 million Corps' capability for this project of deepening the Mississippi River channel.

Mr. Chairman:

I am Herbert R. Haar, Jr., Assistant Executive Port Director of the Port of New Orleans. I am here to testify on behalf of the Board of Commissioners of the Port of New Orleans, a unit of local government of the State of Louisiana, on projects of vital interest to the development of Louisiana and neighboring Gulf States, the Mid-America States, and the Nation.

We in the Port industry share the goals of the Administration and this Congress in reducing budget deficits and ultimately balancing the budget. We recognise that we must work closely with each other to achieve these goals. Our contributions as an industry are many, and I would like to share these with you.

The U. S. deep-draft port industry consists of 189 public ports located on the Atlantic, Gulf and Pacific Coasts, and on the Great Lakes. Since World War II, non-federal U. S. port entities have invested more than $45 billion in new and improved cargo-handling facilities. The cash value of marine terminals serving U. S. deep-draft seaports is estimated to be $40.4 billion. To meet the future needs of U. S. commerce, the port industry will be investing a billion dollars a year or more through the remainder of this decade to expand and improve terminal handling facilities. In 1981 the total throughput of the U. S. deep-draft seaport system amounted to 1.941 billion short tons of cargo in foreign and coastwise commerce. Of that tonnage, 887 million tons represented cargo moving in U. S. foreign commerce, valued at $318 billion, generating approximately $6 billion in U. S. custom revenues. Federal expenditures in that same year on deep-draft navigation projects amounted to approximately $350 million. The government is getting a very handsome return on its investment, measured in customs revenues alone. If for no other reason, the government has a very direct interest in assuring the continuous movement of international trade through U. S. ports, for whenever a channel silts up, ocean traffic stops, and customs revenues from that source are lost.

At the national level, the economic impact of the U. S. Seaport Industry is tremendous. For example, in 1980, the U. S. seaports accounted for:

- more than one million jobs
- $66 billion in gross sales within the nation
- $23 billion in personal income
- $7.9 billion in business income
- $5.0 billion in state and local taxes
- $10 billion in federal tax and customs revenue combined

The value of foreign trade equates to more than 20% of the value of the U. S. Gross National Product. These are indeed mighty impressive statistics.

In 1981, the lower Mississippi River deep draft port area stretching from Baton Rouge to New Orleans to the Gulf handled 377 million tons of waterborne, foreign and domestic, cargo, excluding shallow draft through-traffic cargo; thus, surpassing Rotterdam and establishing itself as the largest port area in the world. A closer look at the 1981 statistics for the Lower Mississippi River Regional port area reveals that exports and imports alone reached 183 million short tons valued at $42.2 billion - 21% share of the nation's total.

In grain exports alone, the area is the number 1 exporter in the world. In 1982 these grain exports reached 2.3 billion bushels, accounting for 49% of the U. S. total grain exports. Continued growth and development of this port complex is essential to the national economy. Unfortunately, this growth is being inhibited by the lack of adequate deep-water channels - 55-foot depth - for the larger vessels engaged in world commerce as well as frequent occurrences in recent years of less than authorized project depths at the Mouth of the Mississippi River resulting from heavy silting in Southwest Pass.

Turning to the Tidewater area of the Port of New Orleans - the portion of the port facilities that are directly connected to the Gulf of Mexico via the 76 mile Mississippi River-Gulf Outlet Channel - there has been an average yearly growth in vessel visitation of over 6% during the period of 1970 to 1980. We anticipate even greater growth as new facilities are brought on line. In this essential area of the Port, we estimate that approximately $500 million (public and private funds) has been expended thus far.

Located in the MR-GO area is the Public Bulk Terminal. This facility handled approximately 1.4 million tons of foreign trade during 1982.

The France Road Container Terminal will contain five container ship berths, a roll-on/roll-off ship berth, and 158 acres of associated paved marshalling area when completed in 1989, at which time it is estimated that 4,000,000 tons of containerized cargo will be handled there. In addition, the Port has constructed four more roll-on/roll-off berths where over 500,000 tons of cargo for Central America will be handled.

Also in the MR-GO area, construction has been initiated on the new general purpose Jourdan Road Terminal, and funds have been budgeted to complete the first six berths by 1993. This will represent an estimated $135 million investment when completed. The Terminal is located adjacent to the Almonaster-Michoud Industrial District, which contains 7,000 acres of prime industrial area. Plans are well under way to provide a drainage system and commence construction on the first 1,000 acres, where the Port intends to move its Foreign Trade Zone and free its space on the river to provide back-up area for the Napoleon Avenue Wharf. By the year 2000, the City estimates that 50,000 new jobs will be created in this District.

A total of thirty-one percent of the Port of New Orleans general cargo passing over public facilities is handled in the Tidewater (MR-GO) Port Area. The steady growth in ship passages and cargo tonnage is the direct result of construction of public facilities and private terminals in this area of the Port. The most recent cargo statistics published by the U. S. Army Corps of Engineers reports 5,541,464 tons of cargo moved through the Mississippi River-Gulf Outlet during 1980, of which 79% (4,367,785 tons) represented foreign waterborne commerce and 21% (1,173,679 tons) represented domestic coastwise traffic.

Historically, dredging in the MR-GO is required annually on the bar channel and in Breton Sound. If maintenance dreding is suspended, it is estimated that siltation will reduce the depth at the Gulf of Mexico outlet by three feet within one year. This reduction in allowable draft of ocean vessels wishing to enter the waterway would not only be a telling blow on the economy of this region in particular, but would be felt throughout the nation.

During the current year this channel has shoaled to 29 feet as a result of 2 severe storms passing through the area. This shoaling has caused vessel grounding, cargo tonnage restrictions and increased concerns on the part of the shipping industry. We are reminded that over 11,000 employees depend upon the marine commerce that travels via the MR-GO for their livelihood. It is imperative that adequate funds for maintenance dredging be provided annually for this important waterway, which had an annual economic impact of $500 million on this area in 1981.

For these reasons we urge that $8.48 million be appropriated by the Congress for the Mississippi River-Gulf Outlet, Operation and Maintenance, General.

The Port of New Orleans is the number 1 port in the Nation (with a total of foreign and domestic waterborne commerce tonnage of 190 million in 1981). The Port of Baton Rouge located 125 miles upriver is the fifth. Both port complexes are entirely dependent upon timely and adequate dredging of the Southwest Pass to provide access to the Gulf. In only three years, 1972, 1976, and 1977, out of the past ten has full project depth been maintained by the Corps of Engineers at Southwest Pass for the entire high water season. We are concerned that insufficient funds may be available for maintaining the pass and crossings, assuming from past experiences with spring thaws bringing higher river stages and higher rates of siltation. We strongly recommend that the Administration's proposed budget of $26,428,000 for Operation and Maintenance, General, Mississippi River, Baton Rouge to the Gulf, be increased to include an additional $3,572,000 for necessary dredging of crossings between Baton Rouge and New Orleans and repairs to training works in Southwest Pass. This proposed funding of $30,000,000 is less than the Corps of Engineers' capability of $37,428,000.

Equally important on the lower Mississippi River is the need to continue the efforts in designing various structures comprising the training works of Southwest Pass. These improvements could well decrease annual maintenance costs, and, therefore, we recommend that the full Corps of Engineers' capability of $800,000,Construction, General, be appropriated by Congress.

A new lock to connect the Mississippi River and the Mississippi River-Gulf Outlet has been long authorized by the Congress and is in a design status. The existing 60 year old lock built by the Port of New Orleans and leased to the Corps of Engineers is in need of a major overhaul. This undersized lock, now providing this connection, has been carrying its peak design capacity tonnage for years with increasing delays being experienced by waterway operators transiting the lock. The Corps has estimated that tonnage demand for this lock will increase at the rate of 1 million tons per year for the next 50 years. The Governors of Alabama, Arkansas, Iowa, Louisiana, Mississippi, Oklahoma, and South Dakota have gone on record previously in strong support of this project. This project is vitally important to the future of the Port of New Orleans, the entire Mississippi Valley, all of the Gulf States and has been classified by a former Chief of the U. S. Army Corps of Engineers as the second most important navigation project in the United States. We, accordingly, request that engineering and design effort continue and that this effort be funded as proposed in the Administration's budget, an amount of $500,000, the Corps' full capability for this project under Construction, General, Mississippi River-Gulf Outlet.

A fifty-five foot channel for the lower Mississippi River from Baton Rouge to the Gulf is urgently needed to service the foreign trade and commerce of the mid-America hinterland which accounts for 35% of the population; 34% of the purchasing power; 41% of the productive industry; and 40% of the employment of the United States.

With respect to coal, we have noted that nation-wide coal exports have declined to 105 million tons in 1982 from a record of 110 million tons in 1981. Despite this downturn in the economy, Electro-Coal Transfer Terminal located on the Mississippi River left descending bank at Mile 55 has completed Phase I of its expansion program and proceeded immediately into Phase II construction. At the end of Phase I the facility could handle 12 million tons of coal per year and with the completion of Phase II will be able to handle 30 million tons. Likewise, International Marine Terminal located on the left descending bank at Mile 57 has just completed expanding its facility to the capability of handling 15 million tons per year.

We in the lower Mississippi River Regional port complex and members of the Mississippi Valley Coal Exporters Council are optimistic regarding the growth of increased trade taking advantage of deeper draft vessels and the need for deep-draft channels.

In March, 1982, the Governor of Louisiana appointed a Task Force to study the feasibility and viability of a deep-draft channel through reviewing the Corps of Engineers Study. The Task Force contracted with a world-wide architect-engineering firm to provide necessary technical and financial reviews, reports and recommendations. Phase I of the review was completed in early February and Phase II is scheduled for completion in mid-April with the final report due in mid-May.

Preliminary findings have been generally consistent with those of the Corps of Engineers in its Deeper-Channel Report and have also developed alternatives that could achieve significant savings in the final cost of the project. The critical issue, of course, is the transportation cost.

By lowering the delivered cost of U. S. Coal through port and channel improvement, the United States enhances its competitive position. Predictions of coal buyers' market behavior are highly uncertain ; however, failure to take any action to improve our ports may be viewed by potential customers and allies as inconsistent with our national commitment to make coal available for export. Finally, it should be clear that enhancing coal exports, as part of the international effort to increase the production and use of coal, produces benefits beyond those directly attributable to ocean shipping.

This is the time for expediting completion of the Mississippi River-Gulf Outlet Enlargement, and we urge Congress to fully fund the Corps to its full capability of $2,100,000 under General Investigations for completing the studies on the deepening of the Mississippi River.

I have with me Mr. Sam Giallanza, Senior Vice President of the New Orleans Steamship Association, and Captain Daniel R. Meyers, Jr., President of the Associated Branch Pilots, who will file and make brief statements in support of the projects that the Port of New Orleans has recommended.

Thank you.

STATEMENT OF SAM GIALLANZA, SENIOR VICE PRESIDENT, NEW ORLEANS STEAMSHIP ASSOCIATION

Senator JOHNSTON. Mr. Giallanza.

Mr. GIALLANZA. Thank you sir, Senator Johnston, I have submitted a statement which I would like to have included in the record.

My name is Sam Giallanza. I am the senior vice president of New Orleans Steamship Association. We represent some 67 steamship owners, operators, agents, and stevedores who, in turn, represent hundreds of ship owners in international commerce.

In 1982, our port area accommodated 7,500 deep-river vessels that will service us on the Mississippi River from the Gulf of Mexico to Baton Rouge and on the Mississippi River-gulf outlet.

We endorse the testimony of Mr. Haar. I will not get into that detail; it is included in my statement.

EMPLOYMENT BENEFITS

I would like to make some comments about jobs, which is a little different for me, because we usually get up here and talk about dredging. If you do not mind, I would like to talk about that and put that and dredging together.

The current economic conditions have created an unemployment problem—one of the major concerns to the Congress. As I understand it, Congress wants to maintain current jobs and create new job opportunities. Funds invested in river projects on the lower Mississippi River and in the Mississippi River-gulf outlet will help to accomplish these objectives.

According to port studies, each 600 tons of waterborne creates one job. In 1981, there were 183 million tons of foreign waterborn commerce handled through the lower Mississippi River, accounting for more than 300,000 jobs throughout the Nation. However, loss of authorized channel depths results in lost tonnage and creates unemployment.

Let me tell you about a recent development. On January 20 of this year, a severe storm caused extensive shoaling on the Mississippi River-gulf outlet. Within hours, the controlling draft was reduced from a draft of 36 feet to 30 feet. A lump of mud estimated to be 300-by-600-by-6 feet formed overnight in the bar area. This devastated the Port of New Orleans, because the port's major container facilities and the bulk handling plant are located on this waterway. Today, 76 days later, restrictions remain. The controlling draft is 32 feet—4 feet under project depths. The reasons: Lack of dredges, breakdowns on operating dredges, and the time involved in mobilizing private-sector dredges. The Corps' hopper dredge *Wheeler*, provisionally accepted in November 1982, has been plagued with problems. Last Wednesday, almost 2 years after launching, this $70 million dredge began the operations she was designed for—dredging in our area. And while the mud stays in the channel, ships are diverted to other ports, with each vessel diverted costing us 40 man-days of employment.

The first hydrographic study of the Mississippi River-gulf outlet since its completion 20 years ago was made last year and showed a severely deteriorated channel. The Corps is struggling to dredge 20 years of neglect and restore the channel to project dimensions so jobs in our area will be preserved.

Channels where Federal funds are invested to maintain or expand project dimensions will handle more cargo, thereby creating jobs. Let me give you an example of how jobs are created by these investments.

While Southwest Pass is presently at project depth of 40 feet, it does not safely accommodate the large vessels. Vessels over 100,000 deadweight tons are restricted to a draft of 39 feet. This loss of 1 foot greatly affects both local and national employment.

Each vessel has a characteristic called tons per inch, TPI. This characteristic measures the tonnage that a ship can carry for each additional inch of draft. Ships of 100,000 deadweight tons have a TPI of 250 or greater. The restriction of just 1 foot causes these vessels to lose 3,000 tons of cargo on every voyage. The resulting loss to our economy last year is estimated at 610 jobs.

The loss of job opportunities compounds the terrible employment picture in our industry. The employment of men represented by the International Longshoremen's Association on the lower Mississippi River has decreased 35.9 percent from fiscal 1981 to fiscal 1983 on a projected basis. Maintaining the deep-water projects on the lower Mississippi River is maintaining jobs.

On behalf of our industry, I urge you to support funds to invest in the projects needed to maintain the viability of the lower Mississippi River as the No. 1 port area in the United States. The dividends from this investment will be the jobs we so desperately need.

Let me state for the record we have had excellent cooperation from the Corps of Engineers. To this committee, thanks from our industry for your support in past years and for allowing me to appear here today.

Senator JOHNSTON. Thank you very much, Mr. Giallanza.

[The statement follows:]

STATEMENT OF S. GIALLANZA, SENIOR VICE PRESIDENT, NEW ORLEANS STEAMSHIP ASSOCIATION

1. Repairs to Jetties, Dikes and Maintenance Dredging of Southwest Pass and Maintenance Dredging of the Mississippi River from Baton Rouge to the Gulf and Construction of New Anchorage Area.

   The Lower Mississippi River, from the Gulf to Baton Rouge, ranks as the No. 1 port in the world. If the cargo-carrying capacities of vessels are again restricted by reduced entrance channel depths, this area will rapidly lose its world port status, and this will have a detrimental effect on the National economy. The President's budget appropriation for FY 84 is $26.428 million. We urge that $30 million for Operation and Maintenance, General, Mississippi River, Baton Rouge to the Gulf, be appropriated. The nominal amount of $3.572 million over the President's budget could be used for normal dredging. This small investment will save significant dredging costs in future years. The President's budget fully funds the Corps' Construction, General, Mississippi River, Baton Rouge to the Gulf capabilities. We urge approval of this funding amounting to $0.8 million.

2. The Mississippi River-Gulf Outlet Maintenance Dredging.

   The number of vessels using the Mississippi River-Gulf Outlet has continued to increase. Located on this waterway are the Port of New Orleans' Bulk Handling Plant, the new container facilities, the ro-ro terminal and additional facilities under construction which provide newer cargo handling methods to accommodate the larger ships now serving international trade. It is recommended that $8.48 million, which amount is included in the President's budget, be appropriated for Operation and Maintenance, General Funds, Mississippi River-Gulf Outlet.

3. The Mississippi River-Gulf Outlet New Ship Lock.

   The design for the urgently needed new ship lock is now underway. This lock, once in operation, will relieve existing hazardous congestion and costly delays to foreign commerce. It will promote the economic growth and development of water-oriented industries along the Mississippi River and the Mississippi River-Gulf Outlet, thus promoting the future growth of the Port area of New Orleans. It is urged that the Congress provide the $2 million as requested in the President's budget for FY 84 to satisfy the Corps of Engineers' capability for the continuance of the preliminary lock design.

4. Fifty-Five Foot Channel for Lower Mississippi River.

   The President has included in his budget $0.6 million for the continuance of the study and preliminary design for this deepened channel during FY 84. We recommend that the Corps' full capabilities be appropriated in that the total is only $2.1 million.

Mr. Chairman:

My name is S. Giallanza. I am Senior Vice President of the New Orleans Steamship Association, whose membership comprises sixty-seven steamship owners, operators, agents and stevedores on the Lower Mississippi River, associated with hundreds of ship owners in international commerce.

I am here today to testify in behalf of four projects vital to the future development of foreign commerce of the ports and innumerable facilities on the Lower Mississippi River from the Gulf to Baton Rouge. These projects, listed below, have impact on the national level in terms of the United States' ability to remain competitive in world trade and should be funded as noted below.

1. Repairs to jetties, dikes and maintenance dredging of Southwest Pass and maintenance dredging of the Mississippi River from Baton Rouge to the Gulf and construction of new anchorage area.
2. Maintenance Dredging of the Mississippi River-Gulf Outlet.
3. Continuation of the Design Program of the Mississippi River-Gulf Outlet New Ship Lock.
4. Development of final plans for the Fifty-Five Foot Channel for Lower Mississippi River.

The importance of maintaining project dimensions is a direct result of the jobs created and maintained by the commerce carried on these channels. The Mississippi River's deepwater ports continue to experience rapid growth. In 1981 (latest figures available), the Corps of Engineers' statistics reflected that 630 million tons of waterborne commerce, 32.3% over 1976, was moved through the Lower Mississippi.

The natural port for the most modern concept in ocean commerce — the barge-carrying vessel—is the Lower Mississippi. Several LASH and SEABEE operators have in the past been forced to divert some of their vessels from their scheduled New Orleans calls. These vessels were required to call at other Gulf ports to offload before calling at New Orleans and then call again at another port to topoff before sailing foreign because of reduced channel depth. Because of shoaling in Southwest Pass, this diversion of cargo added millions of dollars to operating costs and caused the loss of jobs in our area.

Until 1960, this area was served by one grain elevator; this year 11 elevators will supply grain to vessels. Of the more than 2,100 vessels that annually load millions of tons of grain at these elevators, nearly all are of the larger bulk-carrier and tanker class. Many, because of shoaling and/or insufficient project draft at Southwest Pass, are forced to sail with slack holds. The 39-foot draft restriction for 100,000 deadweight ton vessels caused roughly 122 of these ships to sail with 3,000 tons less cargo than if the ship could sail at full project depth (assuming vessels had to forgo 250 tons of cargo for each inch of draft lost). The Port has shown that each 600 tons of cargo creates one job, so the cargo lost on these ships costs our economy 610 jobs. Because of the complex international chartering arrangements, this cargo was not carried on other ships.

If the Lower Mississippi River is to continue as the world's No. 1 port, we must be able to serve the larger, more efficient vessels. To do so, the entrance to our port, Southwest Pass, must not only be maintained at all times at its authorized project depth, it must be deepened.

In addition to the approximately 67 million tons of grain moved in 1982, a 21.9% increase over 1980, millions of tons of petroleum and petroleum products, also carried by large vessels, were moved to and from refineries located on the river between Baton Rouge and the Gulf of Mexico.

The number of vessels that exceed 100,000 deadweight tons calling on the Lower Mississippi River is constantly increasing. There were 588 such vessel calls in 1982, 142% more than in 1976.

We make a special appeal for appropriations in FY84 to avoid in the future the serious silting problems that existed in Southwest Pass in past years. The following data reflects the shoaling in the Pass which has restricted the movement of world commerce through the Lower Mississippi River.

History of Days during which vessels were restricted to less than Project Depth at Southwest Pass

Year	Vessels Under 100,000 DWT	Vessels 100,000 DWT & Over
1970	205 Days - 56.2%	205 Days - 56.2%
1971	139 Days - 38.1%	139 Days - 38.1%
1972	0 Days - 0 %	0 Days - 0 %
1973	278 Days - 76.2%	278 Days - 76.2%
1974	227 Days - 62.2%	260 Days - 71.2%
1975	157 Days - 43.0%	276 Days - 64.7%
1976	0 Days - 0 %	120 Days - 32.9%
1977	0 Days - 0 %	0 Days - 0 %
1978	0 Days - 0 %	97 Days - 26.6%
1979	94 Days - 25.7%	144 Days - 39.4%
1980	60 Days - 16.4%	255 Days - 69.9%
1981	0 Days - 0 %	327 Days - 89.6%
1982	0 Days - 0 %	152 Days - 41.6%
1983 - First 88 days	0 Days - 0 %	82 Days - 93.2%

It should be noted that in 1979 and 1980, after three full years of project depth, we were again faced with draft restrictions at the entrance to the Mississippi River. During the past 13 years, vessels over 100,000 deadweight tons faced draft restrictions for 2,253 days (almost 50% of the time) in 11 of those years. This does not include the fact that if these large vessels wish to transit Southwest Pass at night they are restricted to a 35-foot draft. This restriction causes the vessel to incur extra cost because of delay time, additional tug expenses, additional pilotage, additional launch expenses, etc.

As an example, during a period of restriction, we made a study of 50 of the many vessels that were unable to load their full cargoes as a result of siltation in the Pass. These vessels, only a few of the 7,500 that call at this Port area annually, left behind 350,000 tons of foreign commerce valued at more than $50,000,000. On the current market, the value of this cargo would be greatly increased. This tonnage, forced to be withheld from export, deprived this area of millions of dollars in economic benefits. To cite but one specific example, during a period of shoaling, a bulk carrier of 122,266 deadweight tons was limited to a loading draft of 36 feet rather than the project depth of 40 feet. This vessel was forced to leave behind 11,328 tons of cargo that had a market value in excess of $1.2 million and would have produced 19 jobs.

We cannot emphasize too strongly that draft restrictions will have a detrimental effect on the future of the Mississippi River Port Facilities and the important Mississippi Valley they serve. The inability to constantly maintain project depth deters charterers and owners from entering into contracts for loading full cargoes of bulk commodities at local port facilities due to the uncertainty of the controlling draft. The uncertainty of channel depths could cause the entire area from the Gulf to Baton Rouge to become a penalty port area.

As can be seen, one of the most important and difficult jobs in our area is maintaining the 40-foot project dimension at Southwest Pass. The President's budget for Operations & Maintenance, General, Mississippi River, Baton Rouge to the Gulf is $26.428 million. We recommend an appropriation of $30 million; the additional $3.572 million over the President's budget would be used for normal dredging. We appreciate the need to reduce federal expenditures; however, current investments in this project would result in federal cost savings in the future while creating much-needed jobs now.

We urge the approval of the President's budget of $0.8 million for Construction, General, Mississippi River, Baton Rouge to the Gulf.

The growth of the Port of New Orleans depends, in large measure on the Bulk Handling Plant and the Port's container and Ro-Ro facilities, among others, located on the Mississippi River-Gulf Outlet. This seaway has a project depth of 36 feet. Shoaling has resulted in the loss of project draft. Controlling depth on this channel is currently 32 feet. For safety reasons, transit restrictions apply to vessels with a draft of 30 feet or more. We request that the Congress appropriate $8.48 million for Operations & Maintenance, General, Mississippi River-Gulf Outlet which will satisfy the Corps' capabilities.

The Public Bulk Terminal and the container terminals are located on the Mississippi River-Gulf Outlet, while the grain facilities, many LASH-SEABEE terminals, and the public wharges are located on the Mississippi River. An adequate route between the Mississippi River-Gulf Outlet and the river is essential. The shortest route is an inefficient, antiquated 50-year-old lock with a width of 75 feet and limited to a depth of 30 feet. Its maximum capacity has long been exceeded. The waiting time for passage through the lock at present averages from 8 to 10 hours; however, waiting time on occasion has been in excess of 24 hours.

An adequate ship lock, 150 feet by 1200 feet by 50 feet, has been authorized; and we urge that Congress provide the President's requested $2.0 million to support the Corps of Engineers' capability for continuing the preliminary design of this project.

The need to deepen the channel serving the deep water area of Louisiana is underscored by the growth of two export cargoes—grain and coal. In 1960, the first grain elevator was built in New Orleans. By 1981, after many additional elevators had been built, grain exports had grown to 67 million tons per year on the Lower Mississippi. Studies by the Board of Commissioners of the Port of New Orleans predict that exports of grain and coal will reach 150 million and 120 million tons per year, respectively, by the year 1990.

However, these potential levels may only be reached with a 55-foot channel. It is estimated that $4 per ton or more can be saved exporting grain if the channel can accommodate vessels loaded to 55 feet — $400,000 or more can be saved on just one ship loading 100,000 tons of grain. Brazil, Argentina, Australia, and Canada are becoming more aggressively competitive in the world grain market. It would not be surprising in the future to find America's competitive edge in world grain trade determined solely by the lower transportation costs noted above.

Combined with the projected growth in grain exports is the potential for explosive growth in coal exports. Here, too, is a potential savings in transportation costs to our customers — $6 per ton or more if the channel would allow vessels to load to 55 feet.

The increase in grain and coal exports will have several positive effects on the U. S. economy. Grain, traditionally, has had a positive effect on our balance of payments. The same can be expected of coal exports. But the greatest effect that deepening the channel will have is the creation of new jobs. Based on data from a University of New Orleans study, the increased grain and coal exports through the Lower Mississippi River could result in an additional 35,000 jobs, or more, being created in the area. Based on the impact on the Lower Mississippi River, the jobs created nationally will be very significant. Because of its tremendous positive impact, the Corps' 8.3-to-1 cost-benefit ratio of this $525 million project may be conservative, especially since growth in coal exports were not included.

In order that the strength and growth of the Mississippi Valley will continue, we urge that Congress appropriate the Corps' full capability of $2.1 million for continuance of the study and preliminary design for this project.

I appreciate the opportunity to appear before the Committee.

STATEMENT OF DANIEL R. MEYERS, PRESIDENT, ASSOCIATED BRANCH PILOTS

Mr. MEYERS. I am Daniel R. Meyers, president of the Associated Branch Pilots, New Orleans.

In 1982 my organization made 13,078 transits through Southwest Pass. Of these turns, 3,302 were in excess of 50,000 deadweight tons. Most of these ships over 50,000 deadweight tons could load in excess of 46 feet, and some could load to the maximum of 55 feet. There were 294 vessels whose deadweight tonnage exceeded 100,000 tons. One vessel of 280,000 deadweight tons transited Southwest Pass just to take bunkers up river for the large ships.

In this light, we request the Corps of Engineers be funded to its full capability to continue work on a proposed 55-foot-deep project in the Mississippi River. Recent figures furnished by the Corps of Engineers indicate the benefit-cost ratio for this deep-draft project is 9.5 to 1. This Nation, in its current economic state, can ill-afford to drag its feet on a project that will return $9.50 for each $1 spent.

PILOTTOWN ANCHORAGE

For many years now the Pilottown anchorage has been inadequate. Four year ago the Congress authorized the enlargement and deepening of the anchorage. While the benefits resulting from construction and subsequent maintenance of this anchorage are somewhat intangible and hard to get a handle on, they are tremendous, and the ratio of benefits to cost would necessarily be extremely high. Consequently, we urge that you provide the Corps of Engineers with the funds required to continue work on this project.

MISSISSIPPI RIVER-GULF OUTLET

The Mississippi River-gulf outlet is a tidewater channel 75 miles long, 36 feet deep, and 500 feet wide from the Gulf of Mexico to New Orleans, generally parallel to the Mississippi River. Because the channel is relatively narrow—only 500 feet wide—the passing of large ships is hazardous. Members of my organization and the other pilot organizations are fearful and reluctant to take large vessels through the channel unless there is assurance that the waterway is clear and they will not meet another ship moving in the opposite direction. Operating in this fashion causes shippers to pay high demurrage fees and vessels are waiting for the waterway traffic to clear up. We made 1491 transits in the Mississippi River-gulf outlet in 1982.

We are becoming concerned with the apparent lack of dredging equipment capable of dredging offshore and in narrow, congested areas, such as Southwest Pass of the Mississippi River. This year there was early high water on the Mississippi River and storms on January 20 and February 27 caused a total of 10 feet of shoaling in the bar channel of the Mississippi River-gulf outlet. All the hopper dredges available and operable, three in number, were mustered to the area to keep Southwest Pass open and restore project depths in the Mississippi River-gulf outlet. Because there were so few dredges available and the shoaling was extensive, it was 1 month before improvements in channel conditions were recognized. During this 1-month period, the dredges were only able to maintain status quo.

I know that the large Corps of Engineers dredge *Wheeler* and the large dredge owned by Stuyvesant Dredging Co. are still in the shakedown phase and are not fully operational. However, even when these dredges become fully operational there will remain a shortfall if the Nation's ports are to be considered safe and reliable ports-of-call by foreign shippers.

I urge that money be made available for the continued maintenance of the Mississippi River and Mississippi River-gulf outlet channels, and that this lack of availability of hopper type dredges be reviewed.

Mr. Chairman, I want to thank you for the support in the past and we need your support in the future to keep the ships moving safely in Southwest Pass and the gulf outlet.

Thank you.

Senator JOHNSTON. Thank you very much, Captain Meyers.

As you know, I am very sympathetic to the 55-foot channel. We ought to have it done by now; it ought to be ongoing. Unfortunately, it is not. If this committee could authorize it, I think we would have done so a long time ago. But the Environmental and Public Works Committee does that and we continue to urge them to do so. We have the problem, as you know, of trying to figure out how to do it. We will accept a number of different ways to do it from our standpoint, but the other committee can't make up its mind as to how to get it authorized.

I am sorry for that. I agree that the project that has a benefit-cost ratio of 9.5 to 1 ought to be built and built immediately. It is good for the country, it is good for our balance of trade, it is certainly good for the maritime industry of our State and the Nation. But we will continue to be pushing for that. And, in the meantime, thank you very much for the good testimony and good work you do for the country and for the Port of New Orleans.

Thank you.

Mr. HAAR. Thank you Mr. Chairman, we appreciate very much all of your help over the years and the good work you do for Louisiana and also the help of your staff.

[The statement follows:]

STATEMENT OF CAPT. D. R. MEYERS, JR., PRESIDENT, ASSOCIATED BRANCH PILOTS

In 1982, my organization made 13,078 transits through Southwest Pass, 3,302 of these turns were in excess of 50,000 deadweight tons. Most of these ships over 50,000 deadweight tons could load in excess of 46 feet, and some could load to the maximum of 55 feet. There were 294 vessels whose deadweight tonnage exceeded 100,000 tons. One vessel of 280,000 deadweight tons transited Southwest Pass just to take bunkers upriver.

In this light, we request the Corps of Engineers be funded to its full capability to continue work on a proposed 55-foot-deep project in the Mississippi River. Recent figures furnished by the Corps of Engineers indicate the benefit-cost ratio for this deeper draft project is 9.5 to 1. This nation, in its current economic state, can ill-afford to drag its feet on a project that will return $9.50 for each $1 spent.

For many years now the Pilottown anchorage has been inadequate. Four years ago the Congress authorized the enlargement and deepening of the anchorage. While the benefits resulting from construction and subsequent maintenance of this anchorage are somewhat intangible and hard to get a handle on, they are tremendous, and the ratio of benefits to cost would necessarily be extremely high. Consequently, we urge that you provide the Corps of Engineers with the funds required to continue work on this project.

The Mississippi River-gulf outlet is a tidewater channel 75 miles long, 36 feet deep, and 500 feet wide from the Gulf of Mexico to New Orleans, generally parallel to the Mississippi River. Because the channel is relatively narrow (only 500 feet wide) the passing of large ships is hazardous. Members of my organization and the other pilot organizations are fearful and reluctant to take large vessels through the channel unless there is assurance that the waterway is clear and they will not meet another ship moving in the opposite direction. Operating in this fashion causes shippers to pay high demurrage fees and vessels are waiting for the waterway traffic to clear up. We made 1,491 transits in the Mississippi River-gulf outlet in 1982.

We are becoming concerned with the apparent lack of dredging equipment capable of dredging offshore and in narrow, congested areas, such as Southwest Pass of the Mississippi River. This year there was early high water on the Mississippi River and storms on January 20 and February 27 caused a total of 10 feet of shoaling in the bar channel of the Mississippi River-gulf outlet. All the hopper dredges available and operable, three in number, were mustered to the area to keep Southwest Pass open and restore project depths in the Mississippi River-gulf outlet. Because there were so few dredges available and the shoaling was extensive, it was 1 month before improvements in channel conditions were recognized. During this 1-month period the dredges were only able to maintain status quo.

I know that the large Corps of Engineers dredge *Wheeler* and the large dredge owned by Stuyvesant Dredging Co. are still in the shakedown phase and are not fully operational. However, even when these dredges become fully operational there will remain a shortfall if the Nation's ports are to be considered safe and reliable ports-of-call by foreign shippers.

I urge that money be made available for the continued maintenance of the Mississippi River and Mississippi River-gulf outlet channels, and that this lack of availability of hopper-type dredges be reviewed.

ARKANSAS RIVER BASIN WATER RESOURCE PROJECTS

STATEMENT OF JAMES O. FOSTER, CHAIRMAN, ARKANSAS RIVER BASIN INTERSTATE COMMITTEE

Senator JOHNSTON. Next, we would like to welcome James O. Foster from Wichita, Kans.

Mr. FOSTER. Mr. Chairman, I am James O. Foster from Wichita, Kans., where I am employed by the Boeing Military Airplane Co. I am chairman and spokesman for the Arkansas River Basin Interstate Committee. It is my pleasure to appear here today before this distinguished committee.

Our association represents the five great States of Arkansas, Colorado, Kansas, Missouri, and Oklahoma, and its members have been appointed by our respective Governors to present a consensus of the water resource funding needs of these States in the Arkansas River basin.

In the interest of time, I will not introduce the committee members and other citizens who have accompanied us here today. They are listed in our written statement, but I would ask that you allow them to stand and be recognized

Senator JOHNSTON. Yes. Will those witnesses please stand.

[Large group standing.]

Senator JOHNSTON. Welcome, gentlemen; glad to have you here before the committee.

Mr. FOSTER. Many of them have been here before and they represent a dedicated group of people from the five-State area who have worked over the years to improve the Arkansas basin area through development of its water resources.

All of us sincerely appreciate the opportunity to again appear before this distinguished committee and express our views concerning funding of our water resource projects and studies.

My testimony will be brief, and we have incorporated additional material in the written statement which we have submitted.

We are aware of the inflationary pressure driving up costs of water projects, and we are aware of this administration's approach in its efforts to reduce spending and work for a balanced budget. We cannot afford to be short-sighted. As we all know, it is our responsibility as citizens of this great Nation to protect and control our most precious natural resource—water.

We believe that the Congress has adequately demonstrated its ability to make wise decisions concerning the Nation's annual investment in water resource programs, and must retain this decisionmaking responsibility.

We have experienced the number of active projects and studies in the Arkansas basin shrink significantly over the past years. We need to take a concerned look at the administration's policies requiring full cost recovery. It may well take an even greater toll than past criteria established for conducting studies and planning and evaluating projects.

The Arkansas River basin has a number of projects ready for survey planning studies, advanced engineering and design, and also several ready for construction. The projects hold the key to the future continued economic development and growth of the region. We are here today to emphasize the necessity of getting on with the work.

Without going into the project details that are provided in our written testimony, let me list several of the projects in the five-State Arkansas River basin that we feel are urgently in need of funding in fiscal year 1984. First, we endorse all project funding included in the Federal budget. There is precious little. Second, we urge special attention to the projects listed in each State request included in our written testimony. Third, we wish to emphasize the urgency of the following projects: Fourche Creek flood control project in Arkansas; and hydroelectric capability on the McClellan-Kerry waterway.

There are additional letters from those in the Arkansas area on these projects included in our testimony. The comprehensive water study of the Arkansas basin which is in Arkansas and Oklahoma; the Deep Fork study which is in Oklahoma; the chloride control study which is in Kansas and Oklahoma; the Mingo Creek flood control project in Oklahoma; Big and Little Sallisaw in Oklahoma; the Verdigris River study in Kansas and Oklahoma; the Caney River in Kansas and Oklahoma; the Halstead flood control project. This is ready for authorization and construction, it is a small community in Kansas. However, it has large regional medical center facilities and it is bad where you have a foot of water standing.

The White River basin in Missouri; the Monett country in Missouri; the Fryingpan-Arkansas project in Colorado; and Fountain Creek and tributaries in Colorado. Also dam No. 2 was damaged during recent flooding and we recommend that full funding of these repairs be——

Senator JOHNSTON. Was that from the runaway barge?

Mr. FOSTER. Yes, a runaway barge; it didn't break the dam, but it did damage to the dam itself, the locks.

The interstate committee also urges the Congress to appropriate the full necessary funding for operation and maintenance of Corps of Engineers projects. To assume the shortfall of some $454 million built into the Federal budget can be recovered by user taxes during fiscal year 1984 is just not realistic and could end in economic disaster, particularly as it relates to water navigation.

Inland waterway user taxes can have a seriously detrimental effect on the economy of the whole Arkansas basin if tax levels exceed the ability of shippers to pay and still remain competitive in the international marketplace.

On behalf of the interstate committee, I thank you for the opportunity to appear here today, and for your consideration of our requests. We ask that this committee, as well as the Congress as a whole, continue to provide the leadership it has in the past in determining whether or not our water resource programs are adequate.

There are still many problems that are not being addressed, and many solutions that are still being sought. We must move forward in our water development programs or we will soon be inundated by our lack of water.

Thank you very much.

Senator JOHNSTON. Thank you very much, Mr. Foster. We particularly want to welcome those that are here representing the McClellan-Kerr Waterway, an old group. I know Mr. Henry is out there who worked very nicely with our group in Shreveport.

Thank you very much, Mr. Foster.

[The statement follows:]

STATEMENT OF JAMES O. FOSTER, CHAIRMAN, ARKANSAS RIVER BASIN INTERSTATE COMMITTEE

Mr. Chairman:

I am James O. Foster, from Wichita, Kansas, Chairman and spokesman for the Arkansas River Basin Interstate Committee. It is our pleasure to appear here today before your very distinguished Committee.

Our Committee represents the five great States of Arkansas, Colorado, Kansas, Missouri, and Oklahoma and its members have been appointed by our respective Governors to present a consensus of the water resource funding needs of these states in the Arkansas Basin.

In the interest of time, I will not introduce the Committee members and other citizens who have accompanied us here today. They are listed in our written statement, but I would ask that you allow them to stand and be recognized. Many of them have been here before and they represent a dedicated group of people from the five-state area who have worked over the years to improve the Arkansas Basin area through development of its water resources.

All of us sincerely appreciate the opportunity to again appear before this distinguished committee and express our views concerning funding of our water resource projects and studies.

My testimony will be brief and we have incorporated additional material in the written statement which we have submitted.

The Committee is aware of the inflationary pressure driving up costs of water projects, and we are aware of this Administration's approach in its efforts to reduce spending and work for a balanced budget. We cannot afford to be short-sighted. As we all know, it is our responsibility as citizens of this great nation to protect and control our most precious natural resource --- water.

We believe that the Congress has adequately demonstrated its ability to make wise decisions concerning the Nation's annual investment in water resource programs, and must retain this decision-making responsibility.

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Arkansas Basin shrink significantly over the past years. We need to take a concerned look at the Administration's policies requiring full cost recovery. It may well take an even greater toll than past criteria established for conducting studies and planning and evaluating projects.

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Fourche Creek Flood Control - Arkansas
Hydro-power capability - McClellan-Kerr Waterway
Dark Hollow Project - Arkansas
Arkansas Basin Comprehensive Water Use Study - Arkansas-Oklahoma
Deep Fork (Poteau) Comprehensive Study- Oklahoma
Arkansas Basin Chloride Control - Oklahoma-Kansas
Mingo Creek Flood Control - Oklahoma
Big & Little Sallisaw - Oklahoma
Verdigris River - Kansas-Oklahoma; Caney River - Kansas-Oklahoma
Douglas Lake - Kansas
Halstead, Kansas Flood Control
County Line Lake - Missouri
White River Basin Reservoir - Missouri
Monett 205 Project - Missouri
Fryingpan - Arkansas Project - Colorado (BR)
Fountain Creek and Tributaries - Colorado
Full Funding for Repair of Dam 2 - McClellan Kerr Waterway.

The Interstate Committee also urges the Congress to appropriate the full necessary funding for operation and maintenance of Corps of Engineers projects. To assume the shortfall of some $454 million dollars built into the Federal Budget can be recovered by user taxes during FY 1984 is just not realistic and could end in economic disaster, particularly as it relates to water navigation.

Inland waterway user taxes can have a seriously detrimental effect on the economy of the whole Arkansas Basin if tax levels exceed the ability of shippers to pay and still remain competative in the International marketplace.

On behalf of the Interstate Committee, I thank you for the opportunity to appear here today, and for your consideration of our requests. We ask that this Committee, as well as the Congress as a whole, continue to provide the leadership it has in the past in determining whether or not our water resource programs are adequate.

There are still many problems that are not being addressed, and many solutions that are still being sought. We must move forward in our water development programs --- or we will soon be inundated by our lack of water.

THE ARKANSAS RIVER BASIN INTERSTATE COMMITTEE

FROM ARKANSAS:

W. A. Gieringer, Pine Bluff-Jefferson County Port Authority, Pine Bluff, AR - (State Chairman)
Wayne Bennett, Farmer and Businessman, Lonoke, AR
Homer Hall, Retired Farmer, Ozark, AR
Charles Steel, Sr. V.P., Arkansas Power and Light Company, Little Rock, AR
Douglas W. Parker, Attorney, Ft. Smith, AR

FROM OKLAHOMA:

Houston Adams, President, Bank of Tulsa, Tulsa, OK - (State Chairman)
E. R. Albert, Jr., Albert Equipment Company, Tulsa, OK
Robert S. Kerr, Jr., Oklahoma Water, Inc., Oklahoma City, OK
Harold B. Scoggins, Muskogee, OK
Fred G. Turner, Consultant, McAlester, OK

FROM KANSAS:

James O. Foster, Public Affairs Coordinator, Boeing Military Airplane Company, Wichita, KS - (State Chairman and Chairman of the Interstate Committee)
Roger Brown, President, Home National Bank, Arkansas City, KS
Frant W. Liebert, Attorney, Coffeyville, KS
Taylor Peckham, Peckham Insurance Agency, Augusta, KS
Arthur T. Woodman, Woodman - Architects, Wichita, KS

FROM COLORADO:

Charles L. Thomson, General Manager, Southeast Colorado Water Conservancy District, Pueblo, CO - (State Chairman)
Lee H. Hancock, The High Line Canal Co., Rock Ford, CO
John Javernick, Farmer and Rancher, Canon City, CO
William McDonald, Director, Colorado Water Conservation Board, Denver, CO
Ray D. Nixon, Colorado Springs, CO

FROM MISSOURI:

Gale A. Graham, Retired Vice President, First National Bank & Trust Company, Joplin, MO - (State Chairman)
Ted B. Evans, President, The Bank of Jasper, Jasper, MO
Fred A. Lafser, Director, Department of Natural Resources, Jefferson City, MO
Douglas Mahnkey, Attorney, Forsyth, MO
R. Layne Morrill, Realtor, Shepherd of the Hills Realty, Kimberling City, MO

Mr. Chairman and members of the Committee, my name is James O. Foster. I am Public Affairs Coordinator for the Boeing Military Airplane Company, Wichita, KS and Chairman of the Kansas Governor's Interstate Committee for The Arkansas River Basin. I am pleased to submit this statement today on behalf of myself and the other members of the Kansas Delegation who were appointed to represent the State of Kansas by the Honorable John Carlin, Governor.

My colleagues are Mr. Arthur Woodman, Architect, Wichita; Mr. Frank Liebert, Attorney-at-Law, Coffeyville; Mr. Roger Brown, Bank Executive, Arkansas City; Mr. Taylor Peckham, Insurance Executive, Augusta, Kansas. We are honored to join with our colleagues from the great States of Arkansas, Colorado, Missouri and Oklahoma, in appearing before you today to put forth our views on the appropriations and projects in Kansas and The Arkansas River Basin.

As part of this statement, you will find an appendix which the Delegation wishes to discuss. The Appendix lists those projects in The Arkansas River Basin of Kansas which the Interstate Committee of the State of Kansas requests additional funding. In addition to the budget figure, we have listed our recommended funding to advance or to keep on schedule projects now underway. Many of these projects will save millions of dollars if completed by advancing the work. We recommend that you give every consideration to these advancements as inflation will drive the costs even higher.

There are two particular projects that we wish to call to your attention. One, the Douglass Lake Project was conceived and started as water and flood control project. This Project is badly needed because the cities in the area need the Municipal and Industrial Water Supply (early 1990's). As Wichita, Augusta, Newton, Winfield and Arkansas City continue their growth, water supply will become even more critical.

In recent years, the shortage of rainfall has damaged the present water supply and clearly shows the need for better Municipal and Industrial Water Supply. This project is needed not only for water storage, we believe, but also because farmers with the little rain we get in this area continue to be devastated by floods.

We sincerely hope that you will appropriate funds to the Douglass Lake Project so that planning can start in the foreseeable future.

The Halstead Project is a project of vital importance to not only the City of Halstead but the surrounding area. This project is a flood control project and in past years flooding has extensively damaged the City of Halstead which contains regional hospitals with many specialists. Halstead, although it is not large, provides medical services for a large area surrounding it, as well as serving as a shopping center for a large farming community. Business in the city of Halstead cannot long afford to continue when they are devastated by floods each and every year. The flooding covers the entire downtown area of Halstead and creates problems for water and sewer treatment. The survey, planning and design on this project is completed. The Halstead Project needs authorization and construction money, NOW!

Mr. Chairman and members of the Committee, we wish to thank you for the sincerely and dedicated manner in which you and your distinguished colleagues in the Congress of the United States have dealt with the Water Resources Programs in allowing us to present our views and recommendations to you. We look forward with great expectations and hope for the future of water resource development in Kansas; with your assistance, it can be achieved.

KANSAS INTERSTATE COMMITTEE RECOMMENDATIONS
FISCAL YEAR 1984
ARKANSAS RIVER BASIN IN KANSAS

NAME OF SURVEY OR PROJECT IN KANSAS	CATEGORY **	PRES. BUDGET ($1,000)	REQUESTED FUNDING ($1,000)	PURPOSE OF REQUEST
Arkansas River & Tributaries, Great Bend, KS, to Tulsa, OK (FDP)	(S)	253	600	Put study back on track
Verdigris River, KS & OK (FDP)	(S)	410	371	Continued studies
Arkansas River, Great Bend, KS, to John Martin Dam, C O (FDP)	(S)	180	320	Study completion
Verdigris River, KS & OK Caney River (FDP)	(S)	100	100	Continued studies
El Dorado Lake, KS (FC)	(C)	6,800	6,800	Complete
Grand (Neosho) River, KS & OK (FDP)	(S)	-	400	Resume study
Halstead Project	C	-	2,000	Start construction
Verdigris River, KS & OK, Mingo Creek (FDP)	(SPE)	-	500	Continue study
Douglass Lake, KS (FC)	P	-	200	Initiate planning
Clinton Lake, KS (FC)	OM	1,092	1,100	Continue operation
Council Grove Lake, KS (FC)	OM	604	650	Continue Operation
El Dorado Lake, KS (FC)	OM	311	325	Continue operation
Elk City Lake, KS (FC)	OM	530	550	Continue operation

NAME OF SURVEY OR PROJECT IN KANSAS	CATEGORY **	PRES. BUDGET ($1,000)	REQUESTED FUNDING ($1,000)	PURPOSE OF REQUEST
Fall River Lake, KS (FC)	OM	538	550	Continue operation
Hillsdale Lake, KS (FC)	OM	421	450	Continue operation
John Redmond Dam & Reservoir, KS (FC)	OM	608	625	Continue operation
Kanopolis Lake, KS (FC)	OM	1,072	1,100	Continue operation
Marion Lake, KS (FC)	OM	585	600	Continue operation
Melvern Lake, KS (FC)	OM	1,094	1,100	Continue operation
Milford Lake, KS (FC)	OM	1,100	1,100	Continue operation
Pearson-Skubitz Bill Hill Lake, KS (FC)	OM	503	525	Continue operation
Perry Lake, KS (FC)	OM	1,424	1,500	Continue operation
Pomona Lake, KS (FC)	OM	1,304	1,325	Continue operation
Toronto Lake, KS (FC)	OM	252	260	Continue operation
Tuttle Creek Lake, KS (FC)	OM	1,155	1,200	Continue operation
Wilson Lake, KS (FC)	OM	1,025	1,100	Continue operation

S- Surveys
C - Contruction
AED - Advance Engineering Design
OM - Operation & Maintenance
FDP - Flood Damage Prevention
N - Navigation

MP - Multiple Purpose
FC - Flood Control
SP - Supplemental Preauthorization Studies
SPE - Continuation of Planning & Engineering Studies
S - Study
P - Planning

STATEMENT OF HOUSTON ADAMS, OKLAHOMA CHAIRMAN, ARKANSAS RIVER BASIN INTERSTATE COMMITTEE

Mr. Chairman and members of the Committee, I am Houston Adams, a banker and Oklahoma Chairman of the Arkansas River Basin Interstate Committee, from Tulsa, Oklahoma.

It is my privilege to present this statement on behalf of the Oklahoma members of the Committee in support of adequate funding for water resource projects in our area of the Arkansas Basin. Other members of the Committee appointed by our Governor, The Honorable George Nigh, are: Mr. E. R. Albert, Jr.; Mr. Robert S. Kerr, Jr.; Mr. Harold B. Scoggins, and Mr. Fred G. Turner.

We, together with representatives of the other Arkansas Basin States, fully endorse the statement presented to you today by the Chairman of the Arkansas Basin Interstate Committee.

We appreciate the opportunity to present our views of the special needs of our State concerning several studies and projects.

We were pleased when the President presented in his budget message for FY 1984 $8,300,000 in funds for the continued construction of Arcadia Lake, Oklahoma, and $11,000,000 for Skiatook Lake.

We support the appropriation requests in the Federal Budget.

There are nine projects omitted from the Federal Budget that, in our opinion, are critical to the continued development of water resources in Oklahoma. We are requesting the Committee add the projects and dollars as outlined in the Chart on Page 3.

We are concerned that O & M costs in the budget have a shortfall of some $454 million. To assume that user taxes can fill this gap immediately is just not realistic and could end in disaster. We recommend full funding for the Army Corps of Engineers' civil works program.

We appreciate the concern the Subcommittee has shown in the past regarding a drastic reduction in funding water resource development in this country. We support and encourage continued water development in order to assure adequate resources for America's future growth and prosperity.

We thank the distinguished Committee for the opportunity to present our views on Oklahoma's FY 1984 water development requirements.

OKLAHOMA - In Addition to President's Budget

PROJECT	TYPE	SURVEYS	A E & D	CONSTRUCTION
Arkansas Basin Comprehensive Water Use Study	Comprehensive	Arkansas - 150,000 Oklahoma - 150,000		
Arkansas Basin Cloride Control Project	GDM		300,000	
Deep Fork (Poteau)	Comprehensive	300,000		
Fry Creek Local Flood Protection	FC	300,000*		
Grand-Neosho KS-OK Comprehensive Study	Comprehensive	400,000		
W.D. Mayo Hydro-power	Hydro-power	500,000*		
Mingo Creek Flood Control	FC	500,000*		
Big & Little Sallisaw	Navigation			6,000,000
Skiatook Water Treatment and Conveyance	Water Supply		1,000,000	Start

*CP&E

STATEMENT OF WALLACE A. GIERINGER, ARKANSAS CHAIRMAN, ARKANSAS RIVER BASIN INTERSTATE COMMITTEE

Mr. Chairman and members of the Committee, my name is Wallace Gieringer. I serve as Executive Director of the Pine Bluff-Jefferson County Port Authority and Arkansas Chairman of the Interstate Committee. Other Committee members representing Arkansas are Messrs. Wayne Bennett, businessman from Lonoke; Homer Hall, retired farmer from Ozark; Douglas W. Parker, attorney from Fort Smith; and Charles L. Steel, electric utility executive from Little Rock. We fully endorse the statement presented to you today by the Chairman of the Arkansas River Basin Interstate Committee.

The Arkansas Committee recognizes and appreciates your concern for needed fiscal responsibility. We believe federal water resource investments serve as "investment seeds" which are a catalyst for self-sustaining investment of private capital in achieving long-term economic growth.

Let us identify certain projects vital to the economic well-being of our area. We recommend:

* all funding for the Corps of Engineers which has been included in the President's budget;

* appropriation of funds necessary to repair damages incurred at Dam 2 of the McClellan-Kerr Arkansas River Navigation System resulting from the December 1982 flood;

* funding the needed "Arkansas River, Arkansas and Oklahoma Municipal, Industrial and Agricultural Water Supply Study";

* your support for development of additional hydro-power by the Corps in an innovative and cooperative joint venture with non-federal participation in project costs; and

* we urge you to continue to go slow in legislating changes in our nation's water resources policies which have proven so successful since the 1930's.

To be specific, the continuing urgent flood problems at Fort Smith, Van Buren and Clarksville are receiving well-deserved attention in the feasibility studies proposed for funding in the President's budget. That budget also includes funds for the start of detailed planning (continued planning and engineering) for the Fourche Creek Flood Reduction Project in Central Arkansas. This area experienced major economic loss and loss of eight (8) lives in the disastrous September 1978 Flood. The City of Little Rock has made the necessary provisions to set aside $7 million to fund its share of the project cost. The start of detailed planning represents an urgently needed and essential step to help solve this very dangerous flooding condition.

The budget includes funds for the continuation of feasibility studies on adding hydro-power to the existing low head locks and dams on the Arkansas River. This study was started in 1980 and, thus far, has produced three (3) completed reports, all favorable for the addition of hydro-power production capability. Those projects will make a small, but significant, contribution to reducing our over-all dependence on imported fossil fuels.

In the construction area, the $1.3 billion McClellan-Kerr Arkansas River Navigation System is nearing completion. The budget includes $5,570,000 for work on the Conway water supply relocation, which was authorized by the Congress in 1974, and other necessary miscellaneous minor items.

We in Arkansas are like many other areas of the country in that the annual budget of the Corps of Engineers for operating and maintaining previously constructed projects is now a major annual expenditure. This expenditure is necessary to assure the continued availability of the widespread flood reduction, hydro-power and navigation benefits which justified these projects. In addition, recreation benefits have been far-reaching.

This year, the O&M expenditure takes on a greater significance because of the accident that occurred during the serious flood of December 1982 when numerous barges lodged against Dam 2 of the McClellan-Kerr Arkansas River Navigation System. Damage to the dam has resulted as a consequence of the rapid rise of the river - unprecedented since inception of modern day navigation. We would like, for the record, to congratulate the Corps of Engineers for the prompt, professional and highly efficient manner in which they removed the barges and maintained navigation.

While such acts of God cannot always be anticipated, needed repairs are essential. If Dam 2 were to fail, it would close down the 450 mile $1.3 billion system. As cost estimates have not been developed, we are unable to ask for a specific amount of repair funds. We respectfully urge you to obtain from the Chief of Engineers an approximation of the potential repair cost and to include it in the 1984 Appropriations Law to assure continued operation of the McClellan-Kerr Arkansas River Navigation System.

Lastly, let us address three projects not in the President's budget but which are very deserving of having funding added by the Congress. First is "The Arkansas River, Arkansas and Oklahoma, Municipal, Industrial and Agricultural Water Supply Study." This study is needed in order to answer two very basic questions for the future economic development of the Lower Arkansas River Basin: what and where are the total future water consumptive needs of the area and, secondly, where and how can they be met without adverse impacts on the previously constructed McClellan-Kerr Arkansas River Navigation Project. We would urge your funding to the capability of the Little Rock and Tulsa Districts of the Corps of Engineers to start this urgently needed study.

The second project which we want to note is the construction of additional hydro-power production capability to the low head locks and dams in operation along the McClellan-Kerr Arkansas River Navigation System.
In order to preclude adverse effects on navigation and to preserve the operational integrity of the McClellan-Kerr Arkansas River Navigation System, it is absolutely essential that the Corps of Engineers control the design, construction and operation of any hydro-electric facilities added to that system.

With this provision in mind, we seek your support of a cooperative effort in which non-federal interests participate in a joint venture with the federal government by furnishing a percentage of the cost of constructing and operating the projects as an integrated system. In return, these interests should expect a proportionate share of the energy and capacity developed. Funding to the extent of the Corps's capabilities is needed for detailed planning.

As a third item, we ask you to add funding to the President's budget for continued planning and engineering funds for the Dark Hollow Project at North Little Rock. It provides needed flood relief. As in the case of the Fourche Creek project previously mentioned, local interests have already agreed to sponsor local participation of 35% of project costs. $250,000.

Finally, we would urge you to continue to go slow in legislating changes in our nation's water resources policies which have proven successful since the 1930's. In the navigation area, we need more actual experience of the impacts of user charges, and better data on the specific O&M costs attributable to navigation, before we embark on a more extensive and expensive cost recovery program. We do not agree with the need for cost-sharing pre-authorization planning, especially when considering the fact that more than half of the Corps planning studies end with a negative recommendation.

In these economic times, the imposition of new or expanded non-federal cost-sharing requirements for navigation, flood control, water supply and hydro-power will only serve to broaden the gulf between economically healthy areas and poor areas. Only the healthy ones will be able to participate in federal programs. The poorer areas with real need, and often with greatest potential for growth, will be unable to participate because they can't meet high and unrealistic cost-sharing requirements.

We thank you for the opportunity of speaking to you today and urge you to favorably consider our requests.

ARKANSAS RIVER BASIN REPRESENTATIVES AT CONGRESSIONAL HEARING

Houston Adams - Interstate Committee; President, Bank of Tulsa, Tulsa, Oklahoma

Joseph Q. Adams - Vice Chairman, Tulsa Port of Catoosa, Catoosa, Oklahoma

J. W. Benafield - Mayor, City of Little Rock, Little Rock, Arkansas

Jacques Cunningham - President, Arkansas Basin Development Association; Port Director, Tulsa Port of Catoosa, Catoosa, Oklahoma

James O. Foster - Chairman, Interstate Committee; Public Affairs Coordinator, Boeing Military Airplane Company, Wichita, Kansas

W. A. Gieringer - Interstate Committee; Pine Bluff-Jefferson County Port Authority, Pine Bluff, Arkansas

Russell H. Matson, Jr. - President, Metroplan, Little Rock, Arkansas

Col. Charles D. Maynard - President, Pulaski County Flood Control Committee; Little Rock Chamber of Commerce, Little Rock, Arkansas

Taylor Peckham - Interstate Committee; Peckham Insurance Agency, Augusta, Kansas

Harold B. Scoggins - Interstate Committee; Muskogee, Oklahoma

Charles Steel - Interstate Committee; President, Arkansas Basin Association; Sr. V.P., Arkansas Power and Light Company, Little Rock, Arkansas

Reed Thompson - Mayor, City of North Little Rock, North Little Rock, Arkansas

Charles L. Thomson - Interstate Committee; General Manager, Southeast Colorado Water Conservancy District, Pueblo, Colorado

Fred G. Turner - Interstate Committee; Consultant, McAlester, Oklahoma

Don Venhaus - County Judge, County of Pulaski, Little Rock, Arkansas

Arthur T. Woodman - Interstate Committee; Woodman-Architects, Wichita, Kansas

Bob Wright - Muskogee Chamber of Commerce, Muskogee, Oklahoma

*As of April 1, 1983. A final attendance report will be furnished the Committee staff following the Hearing.

STATEMENT OF GALE A. GRAHAM, MISSOURI CHAIRMAN, ARKANSAS RIVER BASIN INTERSTATE COMMITTEE

Mr. Chairman and members of the Committee, my name is Gale A. Graham, retired banker from Joplin, Missouri, and I appear here today on behalf of the Missouri members of the Arkansas River Basin Interstate Committee. My four colleagues are: Fred A. Lafser, Director, Department of Natural Resources, State of Missouri; Mr. Ted B. Evans, banker from Carthage, Missouri; Mr. Douglas Mahnkey, Attorney from Forsyth, Missouri; and Mr. Layne Morrell, Realtor from Kimberling City, Missouri. We represent the Southwest corner of Missouri which is a part of the Arkansas River Basin. We are honored to join our colleagues from Arkansas, Kansas, Oklahoma and Colorado in appearing before you today and certainly appreciate the time afforded us to testify collectively in support of appropriations for projects along the entire reach of the Arkansas River.

We have a vital interest in the requests which are being submitted today by the Chairman of our Arkansas River Basin Interstate Committee and urge your favorable consideration of those requests. Included in the requests for FY 84 are several projects in Southwest Missouri, among which are: (1) County Line Lake, (2) White River Basin Reservoirs, and (3) A 205 project at Monett, Missouri. We support these projects and hope that the requests for funding will be approved.

We further support and urge your favorable consideration of all the projects in the Arkansas River Basin as listed on the appropriation request summary which is being presented today by the Chairman of the Arkansas River Basin Interstate Committee.

We have testified each year for many years concerning the importance of water resource management projects in the Arkansas River Basin and many others which are in the overall interest of the United States and we feel that adequate appropriations for such projects at this time will provide both immediate and long-range economic benefits for all our citizens.

We are greatly appreciative of your consideration of our needs in the past and solicit your favorable consideration of our requests as presented here today. We sincerely thank you for the opportunity to present them.

STATEMENT OF CHARLES L. THOMSON, GENERAL MANAGER, SOUTHEASTERN COLORADO WATER CONSERVANCY DISTRICT

Mr. Chairman, and members of the Committee, my name is Charles L. Thomson, and I am General Manager of the Southeastern Colorado Water Conservancy District, headquartered in Pueblo, Colorado. I submit this statement today in behalf of the other four members of the Colorado delegation, who were appointed by our distinguished Governor, the Honorable Richard D. Lamm. My colleagues are: Mr. William McDonald, Director, Colorado Water Conservation Board; Mr. John E. Javernick, farmer and rancher from Canon City, representing the Upper Arkansas Basin in Colorado; Mr. Lee Hancock, Superintendent, High Line Canal Company near Rocky Ford, a farmer representing the Lower Arkansas Basin, and Mr. Raymond D. Nixon, retired Executive Director, Department of Public Utilities for the City of Colorado Springs, representing the municipal and domestic water users in the Basin. We are truly honored today, Mr. Chairman, to join our colleagues from the other great States of Arkansas, Missouri, Oklahoma and Kansas, who make up the membership of the Arkansas River Basin Interstate Committee, and we appear before you as a single and unified group respectfully requesting appropriations for necessary Water Resource Projects in the five States. We are particularly delighted today to be represented before this Committee by our distinguished Chairman, Mr. James O. Foster, from Wichita, Kansas.

The Colorado delegation strongly recommends the approval of the appropriations requested by President Ronald Reagan for U.S. Army Corps of Engineer and U.S. Bureau of Reclamation Projects in the State of Colorado. Mr. Reagan recommends the following for continued construction on the Fryingpan-Arkansas Project:

Fiscal Year 1984------------ $6,863,000

This will permit the Bureau to complete modification of the Twin Lakes Dam and the Mt. Elbert switchyard; construction will continue on the second stage facilities of the 200 megawatt Mt. Elbert Pumped-Storage Powerplant, and critical recreation and fish and wildlife facilities at Pueblo Dam and Reservoir. Contracts will be awarded for additional drainage work at the Mt. Elbert Forebay Dam and for rehabilitating the west slope areas, and cleanup work at the Fountain Valley Conduit. Additional funds are recommended for the annual operation and maintenance which is repaid by the Southeastern Colorado Water Conservancy District under our Repayment Contract approved October 23, 1981.

The construction of the Fish Hatchery at Pueblo Dam is particularly critical at this time, due to the unprecedented demand by fishermen from many States, due to the completion of Pueblo Reservoir and the improved water management characteristics of the Arkansas River. The Colorado Department of Wildlife and the U.S. Fish and Wildlife Service have identified the Proposed Fish Hatchery as being ideal for the rapid propagation of fish which can be distributed throughout the State, and possibly surrounding States. The State of Colorado, through the Department of Wildlife, has obtained decrees for the necessary amount of water to be used in the operation of the Fish Hatchery.

We also strongly recommend the appropriations requested by the Administration for U. S. Army Corps of Engineers which include:

Arkansas River and Tributaries above John Martin Dam (continuation of planning and engineering prior to authorization for construction)

Arkansas River above John Martin Dam (phase 1)-------$140,000

Fountain Creek and Tributaries North of Pueblo--------$200,000

John Martin Reservoir O & M -----------$761,000

Trinidad Lake O & M -----------$493,000

The State of Colorado, Pueblo County and the City of Pueblo have declared the Fountain Creek Project at Pueblo as one of the most critical Projects in the State, and we strongly urge that the Congress of the United States give serious consideration to not only appropriating the necessary $300,000, but also additional funds from other Programs such as the Jobs Bill, additional appropriations for U.S. Army Corps of Engineer Programs for others, in order that this necessary work can begin at the earliest possible date. It is essential to prevent devastating floods in the central part of downtown Pueblo, and also would provide necessary employment at a time when the area is experiencing an 18% unemployment figure.

Mr. Chairman, and members of this distinguished Committee, we again want to thank you for the sincere and dedicated manner in which you have permitted those of us who deal in Water Resource Management on a day to day basis to appear before you to present our recommendations regarding appropriations for Water Resource Projects in the five Arkansas River Basin States. You, and your predecessors, can be very proud of your record in appropriating necessary funds down through the years, which have created dams, reservoirs, waterways and other means of conveyance for necessary water supplies, which have made the United States great. We hope this philosophy will continue in the years to come.

STATEMENT OF J. E. BOB WRIGHT, CHAIRMAN, OKLAHOMA GOVERNOR'S WATERWAY ADVISORY TEAM, ET AL.

On behalf of citizens of the City and County of Muskogee, Oklahoma, we whose signatures appear on the attachment, endorse and approve the action of the Arkansas River Basin Interstate Committee and its members from the States of Arkansas, Colorado, Kansas, Missouri, and Oklahoma in presenting their requests for appropriations with which to continue development of the natural resources in the Arkansas River Basin, before this Honorable Committee of the Congress of the United States.

We also endorse the full program on Public Works as adopted by the Arkansas River Basin Development Association of Oklahoma.

Nothing in the past half century has boosted the economy of the Southwestern United States so much as the McClellan-Kerr Arkansas River Navigation System. Not only does it provide this area of the country with economic sources of transportation and electric energy, but it also provides outstanding recreational facilities and flood control measures for literally millions of people. This is to say nothing of thousands of job opportunities which have been created for citizens of a five state area.

Both imports and exports have far exceeded original estimates of the U.S. Army Corps of Engineers since this land-locked area has been connected to the ports of the nation and the world. And this navigation system has become an integral part of the nation, as a whole.

We also recommend the development of low head hydro-electric construction and production throughout the navigation system and feel that it is absolutely essential that the Corps of Engineers control the design, construction and operation of the facilities in order to eliminate adverse effects on navigation and to preserve the operational efficiency of the system. Non-federal interests which benefit from the production of electric power, such as utility companies might share the expense of such projects by supplying one fourth of the construction and operation costs. They should also expect to receive an equal portion of energy that is produced.

We respectfully request that every consideration be given to the recommendations of the U.S. Army Corps of Engineers in order that operation and maintenance can continue and problems can be eliminated as they occur. This will enhance the progress and use of the navigation system in the future as it has in the past.

Due to the uncertainty of the total amount being collected from present user fees, we further recommend that the full amount of appropriations for maintenance and operation of the Nation's Inland Waterways be approved by Congress to enable the Corps of Engineers to maintain complete operation of the waterways until such time as it can be determined the actual amount of revenue that is being generated from this source.

It has been estimated that some $15,000,000 in damage has been done to Lock and Dam No. 2, as a result of an act of God which caused several barges to break their moorings and crash into the structures. We therefore urge that adequate appropriations be made to bring about full repairs to these navigation facilities and that they be included in the 1984 Appropriations Law to assure continued and adequate operation of the McClellan-Kerr Arkansas River Navigation System.

J.E. Bob Wright, Chairman
Oklahoma Governor's Waterway Advisory Team

W.A. Edmondson, District Attorney
Muskogee County, Oklahoma

Coleman Fite, Mayor
City of Muskogee, Oklahoma

James C. Leake
James C. Leake, Chairman
Muskogee City-County Port Authority

W.R. Buck Jones, President
Muskogee Chamber of Commerce

Robert N. Yaffe, Chairman
Greater Muskogee Development Corporation

Ed Edmondson, Former U.S. Congressman

Harold B Scoggins
Harold B. Scoggins, Member
The Arkansas River Basin Interstate Commission
Oklahoma

Randy Nobles
Randy Nobles, Executive Director
Eastern Oklahoma Development District

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The Arkansas River Basin Interstate Commission
Oklahoma

Randy Nobles

Randy Nobles, Executive Director
Eastern Oklahoma Development District

STATEMENT OF RUSSELL H. MATSON, JR., PRESIDENT, METROPLAN

Dear Senator Hatfield:

Metroplan is the council of local governments for the Little Rock-North Little Rock SMSA, comprised of Pulaski and Saline Counties. Metroplan is governed by a Board of Directors composed of elected county and municipal officials representing its 23 member units of local government.

On February 23, 1983, the Board of Directors of Metroplan adopted a resolution calling on the Federal government and the local government of Pulaski County and the Cities of Little Rock and North Little Rock to proceed with the Fourche Creek and Dark Hollow flood reduction projects.

A copy of that resolution is enclosed, with a request that it be made a part of the record of the Committee hearing.

The Fourche Creek and Dark Hollow flood reduction projects were developed by the U.S. Army Corps of Engineers to reduce and possibly prevent flooding problems that have taken many lives and caused millions of dollars of property damage in the past several years. Corps feasibility projects indicate the economic benefits to be derived from these projects.

A demonstration of the importance of these projects and the community support and cooperation committed to them is shown by the successful completion by Metroplan of the Fourche Creek Urban Runoff Study. This study complements the flood reduction project for which funding is requested in our resolution. Supported by the local governments and the U.S. Environmental Protection Agency, the urban runoff study tested flood and pollution management strategies to reduce property damage and enhance environmental quality in the community. This project was cited for achievement by the EPA, which chose it from among thirty such studies carried out nationwide as the one best illustrating the cost effectiveness of controls.

The Metroplan resolution, representing the desires of several governments of central Arkansas, testifies to our community's support for these flood reduction projects. With adequate funding they will be realized and the severe flooding so often the cause of devastation in the Dark Hollow and Fourche Creek basins eliminated.

I thank you for your consideration of these projects.

A RESOLUTION URGING THE EARLY AUTHORIZATION AND FUNDING OF THE FOURCHE CREEK AND DARK HOLLOW FLOOD REDUCTION PROJECTS

WHEREAS, the United States Army Corps of Engineers has developed flood reduction projects for the Dark Hollow and Fourche Creek areas of central Arkansas; and

WHEREAS, after careful review of the Corps of Engineer reports it has been concluded that the projects described herein represent reasonable, responsible and efficient ways and means of reducing the flood hazard, and

WHEREAS, these projects have been supported by the Cities of Little Rock and North Little Rock and the County of Pulaski,

It is now resolved by Metroplan, the regional council of governments and designated planning coordination agency under OMB Circular A-95 and successors thereto, Article 1. That funding for continued planning and engineering be provided at the earliest practical date for both the Fourche Creek and Dark Hollow flood reduction projects:

Article 2. That these projects be authorized for construction by the U.S. Congress in an expeditious manner in order that their benefits may be enjoyed by the people currently being subjected to the flood hazard:

Article 3. That the Cities of Little Rock and North Little Rock and Pulaski County and the State of Arkansas proceed with their separate actions that are necessary to fulfill the requirements of local cooperation of these two urgently needed projects which are:

A. Pay or contributed in-kind thirty-five (35%) of the project first costs, exclusive of recreation facilities.

B. Pay, contribute in kind, or repay one-half of the separable first cost of the project apportioned to recreation.

C. The United States Government will be held harmless and saved free from claims for damages that may result from construction and subsequent maintenance of the project; except those damages that may be caused by the fault or negligence of the United States Government or its contract.

D. The completed works will be maintained and operated at no expense to the United States Government.

E. Action will be taken to prevent encroachment upon the channel detrimental to the flood control purpose of the project and manage all project related channels to preserve capacities of local drainage as well as for project functions.

F. Appropriate flood plain regulations (non-structural) will be adopted which in combination with structural measures for the proposed flood control project will:

(1) Insure unobstructed flooding.

(2) Prevent damages to future developments within the flood plain that would be inundated by a flood that could be expected to occur once in 100 years with the basin totally developed.

Adopted this 23rd day of February, 1983.

Signed: RHMatson
Russell H. Matson, Jr., President

ATTEST:

Jason Rouby
Jason Rouby, Secretary

STATEMENT OF DON VENHAUS, COUNTY JUDGE, PULASKI COUNTY, ARK.

Dear Chairman,

I am Don Venhaus, County Judge of Pulaski County, seat of the cities of Little Rock and North Little Rock. I appreciate the opportunity of appearing here today and offering a statement in behalf of flood control projects on Fourche Creek in Little Rock and Dark Hollow in North Little Rock, both of which are in Pulaski County.

Pulaski County has long been plagued by floods in these two areas, the most severe of which occurred in September of 1978 in the Fourche Creek area and lead to the death of eight people. There have been other deaths in past flooding. Dark Hollow floods periodically because of the inability of the water to remove itself from that area and is a great inhibitor to the development of North Little Rock as well as the cause of great damages, injury and the upon occasion, death to people in the area.

We would urge your approval of the $700,000 included in the President's Budget for advance engineering and design for the Fourche Creek Project in Little Rock. As has been pointed out by other people here today, I would like to tell you of further details concerning the local support for this project. Last year, the City of Little Rock, along with the County of Pulaski, and the State of Arkansas, committed themselves to a 35% share of first cost projects and further committed itself to furnishing this money in advance of the actual authorization and construction. In furtherance thereof, the City of Little Rock set aside $3,500,000 in 1982, and will likewise set aside a similar amount in 1983. This commitment on their behalf, plus a strong commitment by my government, as well as the State of Arkansas, shows the total commitment of local interest for this important project which is a key not only to the safety of our people but to the development of our area.

Similar support exists for the Dark Hollow Project on the North Little Rock side of the Arkansas River, where once again local interests have by resolutions, copies of which have been furnished to you, agreed to a 35% cost sharing of first project costs, excluding recreation. Although funds for the continued study and engineering design of this project are not included in the President's Budget, we would urge you to provide funds for those studies. Last year, a resolution was passed by the Congress directing the Corps to make a study toward finding a feasible project in this area. We would urge that you appropriate $500,000 to speed this study along in order that this project may be constructed as soon as possible. Clearly, the commitment of local interests would warrant the support of the Congress for such a project.

I thank you for appearing here today. I would point out to you that my government will do everything possible to make sure that it and other local interests commit fully to the projects which we support here today, and I would guarantee you our carrying through with the support promised in our resolutions.

Thank you for the opportunity of being here today and for presenting this testimony. We in the County of Pulaski and the State of Arkansas are fully cognizant of the important contributions that the Congress has made to us, our people and our economy by their appropriations in the past in support of flood control projects in the Arkansas River Valley and in the development of the Arkansas River navigation system. We thank you for that and we would urge your support in the matters we have suggested here today.

STATEMENT OF COL. CHARLES L. STEEL, PRESIDENT, ARKANSAS BASIN ASSOCIATION

Mr. Chairman:

The Arkansas Basin Association appreciates the opportunity to present a statement for your consideration today relative to the further development of the McClellan-Kerr Arkansas River Navigation Project for budget year 1984.

My name is Charles L. Steel, Colonel, U.S. Army Corps of Engineers, Retired, and presently Senior Vice President for Arkansas Power and Light, and I address you today as President of the Arkansas Basin Association. The Arkansas Basin Association is an association of individuals and businesses united in the common concern for the development and proper use of our nation's waterways with particular support for the development in the Arkansas River Basin. This organization, in existence for over 40 years, has been generously received by this committee over many years. We thank you for your past consideration and the opportunity of being here today.

We support and endorse enthusiastically the remarks of Mr. James Foster of Kansas, who serves as Chairman of the Arkansas River Basin Interstate Committee. Five members of that committee are also members of our association, appointed by Arkansas governors to represent the State of Arkansas in the matter of the development of the Arkansas River.

In my statement, I would like to emphasize four particular points to supplement Mr. Foster's remarks.

We urge you to authorize the $700,000 contained in the President's Budget for continued planning and engineering study funds for the Fourche Creek Project in Little Rock, Arkansas. Already the City of Little Rock has set aside $3,500,000 as part of their share of local costs. An additional $3,500,000 has been committed for 1983. As was pointed out to you by Mr. Foster, the State of Arkansas, the County of Pulaski, which contains Little Rock, and the City of Little Rock have by resolution agreed to furnish 35 percent of the total cost project as a local share. This commitment, in advance of the project, and in particular, the actual setting aside of monies by the City of Little Rock, is strong evidence of their desire to move rapidly ahead. We would urge you to appropriate these funds in order that monies already made available by the City may be utilized in rapidly completing this project.

We request you to add $500,000 to the President's Budget funds for the continued engineering planning and studies for the Dark Hollow Flood Control Project in North Little Rock, also in Pulaski County. Here, once again, local interests, i.e., the State, the County and the City of North Little Rock, have committed to a 35 percent cost sharing and are prepared to move ahead on this important project. Although money is not presently in the President's Budget, the commitment at this time by the local interests would support the continuing study and preparation for construction by the Corps of a project in this area.

We also would appreciate your favorable appropriations consideration for the Arkansas River, Arkansas and Oklahoma, Municipal, Industrial and Agricultural Water Supply Study. This study is needed in order to answer two very basic questions for the future economic development of the lower Arkansas River Basin: what and where are the total future water consumptive needs of the area; and, secondly, where and how can they be met without adverse impacts on the previously constructed McClellan-Kerr Arkansas River Navigation project. The need for this study has been well recognized by environmental, conservation and developmental groups, as we all agree that we must know the answers to those questions as we seek ways and means of conserving our valuable environmental resources while at the same time making necessary and essential provisions for municipal, industrial and agricultural water supply, which is a basic building block for our future economic well-being. We would urge you to appropriate $500,000, which should be within the approved capability of the Little Rock and Tulsa Districts of the Corps of Engineers to start this urgently needed study.

We ask this Committee to provide funds for the addition of hydropower production to the low head locks and dams presently existing on the Arkansas River. These projects, which have no environmental problems, several of which have already received favorable review from the Board of Engineers for Rivers and Harbors, will more than pay any cost of construction by sale of the power generated. Local interests have agreed to cost-sharing of these projects in return for rights to share powers in the Flood Control Act of 1944. We would particularly urge your authorization of funds to move rapidly ahead.

Lastly, but probably most importantly, the Arkansas Basin Association urges the Congress to obtain information from the Corps of Engineers as to the cost of repairing damages to Dam 2 on the Arkansas River caused by the disastrous floods of December 2 and 3 of last year, and to provide funds for these repairs through the Corps Operations and Maintenance Budget. As a result of these floods, a number of barges were swept against the dam.

The salvage cost to remove the barges from the dam, and the damages caused thereby, the total cost of which have not yet been determined, in our opinion were a result of a flow of water unprecedented in the short time duration and rapid rise. We feel that this Act of God is something that local business interests could in no way insure themselves against. We believe that in view of the national importance of the Arkansas River Project and its total benefits to the entire nation as well as the entire Arkansas River Valley, the government should appropriate the necessary money to pay for the cost of salvage and rapid repair of this dam, so that the entire project might not be jeopardized, first by the possible loss of the operators which in turn would negate their desires and reasons for operating on this important river.

We thank you for the opportunity of being here today. We thank you for your past appropriations and urge you to support our requests.

STATEMENT OF COL. CHARLES D. MAYNARD, CHAIRMAN, PULASKI COUNTY FLOOD CONTROL COMMITTEE

Mr. Chairman:

I am Charles Maynard, Colonel, U.S. Army, Retired, and I appear here today on behalf of the Greater Little Rock Chamber of Commerce and as Chairman of the Pulaski County Flood Control Committee.

The Chamber and the Flood Control Committee enthusiastically concur in and support the statements presented to you today by Mr. James Foster of Kansas, Chairman of the Arkansas River Basin Interstate Committee, and by Charles L. Steel, President of the Arkansas River Basin Association. We would endorse their remarks to you.

Besides our support for the above remarks, we would urge approval specifically for the amounts included in the 1984 President's Budget for operation and maintenance of the Arkansas River Navigation Project and would particularly ask your consideration for support of four projects.

The City of Little Rock, the State of Arkansas and the County of Pulaski have jointly agreed to furnish 35 percent of first project costs, excluding recreation, for the Fourche Creek Project. Seven hundred thousand dollars ($700,000) is included in the President's Budget for continued engineering studies and planning of this important flood control measure. Already the City of Little Rock has set aside another $3,500,000 this year, has passed a county-wide one percent sales tax and has moved aggressively to support this project. The State and the County have likewise agreed to such financial support. We would urge you to appropriate these funds so that this important project, which came into sharper focus because of the September 1978 flood which cost the lives of eight people in Little Rock, can be constructed rapidly.

We would also urge you to include in the President's Budget $500,000 for the continuing study and engineer planning for the Dark Hollow Project in North Little Rock. Again, as in the case of Fourche Creek, local interests, specifically the State, the County and the City of North Little Rock, have by resolution (copies of which have been furnished to you today) agreed to 35 percent local funding costs for this project. We urge that you move rapidly forward as this project is important not only for its flood control aspects but for its general economic benefit for the entire area.

Third, we would urge you to provide funds for the addition of hydropower production to the "in-operation" low head locks and dams on the Arkansas River, with particular emphasis to those projects which have already met with approval by the Board of Rivers and Harbors for the Chief of Engineers. We would particularly urge rapid movement ahead for the project at Murray Lock and Dam in the vicinity of Little Rock.

Lastly, we would urge that the Congress appropriate funds to effect repair and to pay for salvage costs occasioned by damage to Dam 2 on the Arkansas River, caused by the unprecedented flooding conditions that arose as result of the intense rains of December 2 and 3, 1982. Although full costs have not yet been determined for the work necessary to restore Dam 2 to its original condition, we would urge the Congress to ascertain from the Corps any such costs and to appropriate these funds to effect repairs to the structure. We believe that this damage was caused by an unprecedented Act of God and was something that local interests could not have protected nor insured themselves against.

STATEMENT OF REED W. THOMPSON, MAYOR, NORTH LITTLE ROCK, ARK.

Dear Chairman:

I am Reed Thompson, Mayor of the City of North Little Rock, and I appreciate the opportunity to appear here today to offer statement on behalf of a much-needed flood control project in my city.

I would urge you to add $500,000.00 to the President's Budget for continued engineer planning and study for the Dark Hollow Project in North Little Rock. Over the years, North Little Rock has experienced continued flooding because of the inability of flood waters in that area to flow from the area. The City of North Little Rock, the County of Pulaski and the State of Arkansas have all signed resolutions committing the local interest to a 35% cost sharing for this project. By resolution this past year, the Corps of Engineers was directed to continue the studies to determine a feasible project for this area. We would urge you to provide the funds necessary for that study.

The City of North Little Rock would like to associate itself with the remarks of Mr. Jacques Cunningham of Oklahoma, Chairman of the Five-State Interbasin Committee, and Col. Charles Steel, President of the Arkansas Basin Association, in support of appropriations for the Arkansas River Navigation Project.

I thank you for the opportunity of being here today, and we, in the City of North Little Rock, once again commit to you our full support for the necessary funding of local interests in the Dark Hollow area.

RESOLUTION NO. 2356

A RESOLUTION ENDORSING THE AUTHORIZATION AND EARLY CONSTRUCTION OF THE DARK HOLLOW FLOOD CONTROL PROJECT DEVELOPED BY THE UNITED STATES CORPS OF ENGINEERS.

WHEREAS, the United States Army Corps of Engineers has developed a plan for local flood protection and environmental enhancement consisting of three and one-half miles of concrete-lined ditch, control structure for prevention of Arkansas River backwater, hiking trails, and two picnic tables for the Dark Hollow area within the City of North Little Rock, Arkansas; and

WHEREAS, the report on the plan is now being considered by the committees of the Congress of the United States, it is necessary for local interests, through the medium of a public body, to furnish the Corps of Engineers appropriate assurances that the requirements of local cooperation will be met; and

WHEREAS, the City Council of the City of North Little Rock, Arkansas, is such a public body, representing local interests.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF NORTH LITTLE ROCK, ARKANSAS:

SECTION 1: The City Council of the City of North Little Rock, Arkansas, by subsequent legislation at the appropriate time will take all steps necessary to meet the requirements of local cooperation and hereby declares its intention to furnish or cause to be furnished the following requirements of cooperation:

(a) pay, contribute in kind, or repay thirty-five percent (35%) of the project first cost, exclusive of recreation facilities, with appropriate credit for all furnished lands, easements, rights-of-way, and relocations necessary for construction and maintenance of the project,

(b) furnish assurances satisfactory to the Secretary of the Army prior to initiation of construction of the project that they will:

1. hold and save the United States free from claims for damages that may result from construction and subsequent maintenance of the project, except those damages that may be caused by the fault or negligence of the United States or its contractors;

2. maintain and operate at their own expense the completed works in accordance with regulations prescribed by the Secretary of the Army;

3. prevent encroachment upon the channel detrimental to the flood control purposes of the project and manage all project-related channels to preserve capacities of local drainage as well as for project functions;

4. adopt and enforce appropriate flood plain regulations (non-structural measures) which in combination with structural measure for the proposed flood control project would:

(a) insure an unobstructed floodway,

(b) prevent damages to future development within the flood plain that would be inundated by a flood that could be expected to occur once in 100 years;

5. provide without cost to the United States fill areas for the disposal of excess materials from the channel excavation work, the areas to be within reasonable haul distance of the project (approximately 2 miles); or bear the cost for the excessive haul distance;

6. pay, contribute in kind, or repay with interest, one-half of the separable first cost of the project apportioned to recreation.

SECTION 2: The North Little Rock City Council urges the appropriation of continued planning and engineering funds in the FY 1984 Water Resource

Appropriations Law for detailed planning of the Dark Hollow Flood Reduction Project in order to expedite the eventual provision of needed flood relief.

SECTION 3: This resolution shall be in full force and effect from and after its passage and approval.

PASSED:

February 28, 1983

APPROVED:

Reed W. Thompson

MAYOR

SPONSOR:

Reed W. Thompson

ATTESTED:

Jackie C. Neil

CITY CLERK

APPROVED AS TO FORM:

CITY ATTORNEY

This resolution prepared by the Mayor's Office.

STATE OF ARKANSAS)
SS
COUNTY OF PULASKI)

I, Mrs. Jackie C. Neil, City Clerk of the City of North Little Rock, Arkansas, do hereby certify that the foregoing is a true and correct copy of Resolution No. 2356, adopted by the City Council of the City of North Little Rock, Arkansas, on the 28th day of February, 1983, and that same is now on record in the Office of the City Clerk.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seal of the City of North Little Rock, Arkansas, this the 2nd day of March, 1983.

SEAL

Jackie C. Neil

MRS. JACKIE C. NEIL, CITY CLERK

STATEMENT OF J. W. BENAFIELD, MAYOR, LITTLE ROCK, ARK.

Dear Mr. Chairman:

I am J.W. Benafield, Mayor of the City of Little Rock, Arkansas. I am honored and pleased to be here and to present to you testimony on behalf of an important water resource development in and around Little Rock.

I refer specifically to the Fourche Creek Flood Control Project for which $700,000 (for continuing engineer study and planning) has been included in the President's Budget. The City of Little Rock, the County of Pulaski and the State of Arkansas have jointly committed to furnish 35 percent of first costs, excluding recreation, as their share of this important project. The City of Little Rock set aside $3.5 million towards our share of that funding in 1983. We will appropriate a similar amount in 1984. We firmly believe we have shown our full commitment to this project, and we would urge you to appropriate these funds for the Fourche Creek Flood Control Project.

The City of Little Rock would like to endorse the remarks of Mr. Bill Foster, Chairman of the Five States Interbasin Committee, and Colonel Charles Steel, President of the Arkansas Basin Association, concerning the importance of O&M funds on the Arkansas River. The development of this river has been one of the most important economic actions in our area in the past 150 years. The floods that occurred in 1982 with the resulting damage to the Dam No. 2 structure could have eliminated the river as a major means of transportation. The damages that occurred, although not ascertained in total value at this time, must be repaired in order that the nation and this region can take advantage of this important project which the Congress of the United States, in its wisdom, provided for in the past. We would urge you to appropriate funds to cover the cost of salvage and to effect repairs to the damage caused to this structure by the unprecedented flooding, clearly an act of God, in the fall of 1982.

We appreciate the opportunity to be here today. On behalf of the City of Little Rock, may I thank you for your many appropriations of the past and your keen understanding of our navigation and flood control needs.

RESOLUTION NO. 6,949

A RESOLUTION SUPPORTING THE PLAN OF THE U.S. CORPS OF ENGINEERS FOR FOURCHE BASIN FLOOD CONTROL; STATING THE INTENT OF THE CITY OF LITTLE ROCK TO PROVIDE FUNDS FOR ITS SHARE OF THE NONFEDERAL COSTS; AND FOR OTHER PURPOSES.

WHEREAS, the City of Little Rock has an urgent need for flood protection; and

WHEREAS, the Corps of Engineers has developed alternative plans for the development and flood protection of the Fourche Drainage System, which plans were the subject of a presentation to the Board of Directors and reviewed by various staff members of the City of Little Rock; and

WHEREAS, after review and consideration of these plans, it has been determined that Plan VII with acquisition of Fourche Bottoms (the plan recommended by the Board of Engineers for Rivers and Harbors) be authorized and funded for construction for the reasons that said plan combines elements of structural development, land acquisition, floodplain management, recreation and preservation of historical, environmental and archaeological sites; and

WHEREAS, the City desires to see expenditious approval, funding and implementation of Plan VII including cost sharing in the acquistion of the Fourche Bottoms.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE CITY OF LITTLE ROCK, ARKANSAS.

SECTION 1. The Board of Directors of the City of Little Rock hereby approves and intends to support the plan of the U.S. Corps of Engineers for Fourche Bayou Basin.

SECTION 2. The Board of Directors of the City of Little Rock commits to provide for 75 percent of the nonfederal share of the cost of the project.

SECTION 3. The Board of Directors of the City of Little Rock hereby states its intent to appropriate General Revenue Sharing funds received by the City in 1983 and 1984 in an amount necessary to provide for 75 percent of the nonfederal cost of the project.

SECTION 4. The Board of Directors urge the appropriation of the $700,000 included in the President's FY 84 budget for Continued Planning and Engineering for the Fourche Creek Flood Reduction Project.

SECTION 5. This Resolution shall be in full force and effect from and after its adoption.

ADOPTED: March 1, 1983

ATTEST: Jane Czech
City Clerk

APPROVED:
J.W. Benafield, Mayor

O'NEILL UNIT, NEBRASKA

STATEMENT OF ALFRED DRAYTON, PRESIDENT, NORTH CENTRAL NEBRASKA RECLAMATION DISTRICT

ACCOMPANIED BY:

CLINTON VON SEGGERN, PRESIDENT, NEBRASKA NATURAL RESOURCES COMMISSION
DAYLE WILLIAMSON, VICE PRESIDENT, NEBRASKA NATURAL RESOURCES COMMISSION
ALLEN CHRISTENSON, VICE PRESIDENT, O'NEILL NEBR., PRODUCTION CREDIT ASSOCIATION

Senator JOHNSTON. Next, we have Alfred T. Drayton, president of the North Central Nebraska Reclamation District.

Mr. DRAYTON. I am Alfred Drayton and with me is Allen Christenson. Allen is the vice president of the O'Neill, Nebr., Production Credit Association. He has been in that office for some 15 years. We have been directed to respectfully request your continued support of the O'Neill unit.

Again, we would like to thank you for your past support and your encouragement along the way, particularly when we have been tied up.

The U.S. attorney has asked the court to set a date some time shortly after the 15th of this month to continue with our long, drawn-out trial. The opposition has held the O'Neill unit hostage over 15 years.

CONTINUED LEGAL DELAY

They started by challenging the environmental impact study. In the beginning they had 23 complaints. The first trial eliminated 19 of them. The Bureau of Reclamation made more investigations on dam safety alternatives to the project, ground water, and wildlife. The second trial cleared up ground water and wildlife issues, which left only two. Being unable to satisfy the court on dam safety and alternatives, the Bureau engaged two highly qualified consulting firms to study the remaining items.

About that time the opposition asked to change lawyers. This was granted by the court. And shortly we had eight new positions added to the case. Now, over a year later, seven of these have been cleared by the judge. We feel the remaining items will be dismissed by the court shortly and no more deliberate delays will be permitted. That is all I have, except to answer any questions you might have.

Mr. Christenson has some comments to make.

Senator JOHNSTON. Thank you very much, Mr. Drayton.

Mr. CHRISTENSON. My name is Allen Christenson and I am a representative of the O'Neill, Nebr., Production Credit Association. This year we come before your committee for consideration and support. I want to bring to your attention five points that are outlined in our testimony package that we have submitted.

No. 1, we have strong local support documented in our list of resolutions and letters. There is an abstract of our elections held in 1979 where 77 and 78 percent of the people voted in favor of the project. Over the past 15 years we had several elections; every election is better. We have good support and it is growing locally.

No. 2, also documented. On November 2, 1982, Nebraska voted 58 percent in favor of issuing revenue bonds to construct water projects. This is a tremendous stand in conservative Nebraska and especially during the current economic conditions in our agricultural economy. The Ogallala aquifer ground water recharge is a common topic as people become more and more aware and concerned about their water.

Charts demonstrating our annual rainfall and the declining water table and the need for O'Neill units are also included. Also included is a newspaper clipping showing what is happening down in the construction on the Calamus Dam where the workers, I think, peak around 500. There are people across the United States, Nebraska, suppliers, providing fuel, repairs, food, et cetera, and when the O'Neill unit is authorized under construction, this will be even greater for Nebraska.

The fifth point is that, as a sponsoring organization, North Central Nebraska Reclamation District, we have asked permission of the Government to increase our repayment on track to the Government by 50 percent. I believe this is unprecedented in irrigation projects. We feel we have one of the best irrigation projects with the highest benefit-cost ratio in the United States and we need your help to build it .

Senator JOHNSTON. Thank you very much, Mr. Christenson. Thank you, gentlemen.

[The statements follow:]

STATEMENT OF ALFRED T. DRAYTON, PRESIDENT, NORTH CENTRAL NEBRASKA RECLAMATION DISTRICT, AND REPRESENTATIVE, NIOBRARA BASIN IRRIGATION DISTRICT

Mr. Chairman and Members of the Sub-Committee:

I am Alfred T. Drayton of O'Neill, Nebraska. The Board of Directors of the North Central Nebraska Reclamation District and the Niobrara Basin Irrigation District sent us to appear before this distinguished group. I have been directed to respectfully request your continued assistance to the O'Neill Unit, Nebraska, for fiscal year 1984.

To begin, may the directors and our constituents express our appreciation for your past support in funding our O'Neill Unit.

The Assistant United States Attorney has asked the Court to set dates for the necessary acts that will conclude the long delay of the O'Neill Unit.

Therefore, as we do not know the exact time when the injunction will be lifted, we hesitate to make any definite request. We feel that it will be more proper to ask your Sub-Committee on appropriations, our representative - The Honorable Virginia Smith, and the Bureau of Reclamation to determine how to proceed.

This time we would like to make four major points in support of our request and this appearance. However, before doing that we emphasize that our material and data filed with you in previous years are still very valid.

The four items to be given special attention are:

1. Continued strong local, regional and statewide support.
2. Continued ground water adversities.
3. Potential for unemployment reversals.
4. Our willingness to pay more toward the O'Neill Unit construction.

For our part, the following are NOT idle statements without foundation or lacking supportive data. For each one of these four major points, we have attached herewith supporting data.

STRONG SUPPORT

Great local support is evidenced by the usual, privileged, secret voting of local people and future water users within the two previously mentioned Districts.

On June 1, 1979, 1294 voters or 77% of the voters within the North Central Nebraska Reclamation District favored the districts contract with the United States while only 385 voters opposed or better than 77% favored the development.

The landowners and water users of the Niobrara Basin Irrigation District on December 15, 1979, voted 152 in favor of this district's repayment contract with the United States and its contract with the reclamation district; only 41 voters opposed. Better than 78% of the water users want the O'Neill Unit development.

(Attached are copies of the results of these local elections.)

As further evidence of local, regional and statewide support for our development we have attached herewith favorable letters, resolutions and endorsements. These include:

- Individual letters
- Group and/or organizational letters, resolutions or endorsements.

At last November's general election, Nebraskans statewide voted overwhelmingly in favor of the construction of water developments. Nebraska's Legislature placed "Proposed Amendment No. 5, LB 577, 1982" on Nebraska's November 2, 1982, General Election Ballot. 247,607 Nebraskans voted in favor of this amendment to Nebraska's Constitution while only 179,550 voted against it - this demonstrates that about 58% of Nebraska's voters favor development.

This constitutional Amendment permits the Nebraska Legislature to authorize the issuance of revenue bonds to pay for the construction of water retention or impoundment structures.

Four of the nine (9) Nebraska counties, casing more than 8,000 voters per county on this amendment are in Nebraska's First and Second Congressional Districts: Eastern Nebraska - Douglas County (Omaha Area) 68,348 Yes, 39,242 No; Sarpy County (Omaha Area) 10,638 Yes, 5,361 No; Dodge County (Fremont and Omaha Areas) 5,040 Yes, 3,911 No; Lancaster County (Lincoln Area) 32,482 Yes, 23,929, No.

The 188,951 votes cast in the 4 eastern Nebraska counties represented more than 44 percent of total votes cast or almost half of all of those voting in the whole state. There were 116,508 "Yes" votes to the amendment - about 2 to 1 in favor of revenue bonds for the construction of water resource structures in Nebraska.

With this type of statewide vote it is most difficult to understand how anyone can sincerely say that Nebraskans do not want water resource development and the O'Neill Unit.

GROUND WATER ADVERSITIES

The attached Annual Precipitation and Ground Water Level Chart for the O'Neill Area describes pictorially the continual decline of the water table; this occurred even when rain and snowfalls were above normal. In fact during 1982, precipitation was more than 8 inches above normal yet this failed to reverse the downward trend. Wells in Keya Paha County and near O'Neill dropped even further.

Niobrara River water from Norden Dam and Reservior will reverse these down trends. These river waters will also improve the ground water quality of the whole area.

UNEMPLOYMENT REVERSAL

The attached Omaha World Herald story (February 20, 1983) of employment activities near Burwell and Ord, Nebraska tells the facts of water resources construction. The prime contractor's Project Engineer, Bob McCabe, reports they want between 200 and 230 workers for the Summer of 1983. He's quoted as saying as many as possible will be from the local labor force. However, he says his company has to advertise for skilled operators and carpenters in the Omaha, Denver, Kansas City and Rapid City newspapers. This construction aids the local labor force as well as unemployment hundreds of miles away.

Norden Dam and other facilities of the O'Neill Unit, like the above sited Calamus Dam and Reservior, are public works, will help local and distant unemployment.

It is estimated that the annual irrigation operations of this development will create about 28 more years of work. An additional 1300 plus man years of work are expected to develop due to the indirect activities of the Nebraska economy because of increased crop and livestock production.

Many of these new jobs will last forever and are a financial investment in the natural resources of our Great America.

And of importance to the United States Treasury is the fact that almost 96 percent of the O'Neill Unit's total cost will be returned to the U. S. Government.

WILLINGNESS TO PAY MORE

Twice, we have told this Committee we water users are willing to pay more to the United States. We are back a third time and we are still willing!!!

As outlined in the attached resolutions, we are willing to increase our payments to the United States by 50 percent - from $11.30 per acre annually to $16.95 per acre per year.

Inflation has increased the annual OM & R cost; we realize this is also an increased cost to us water users which we are willing to assume.

We understand that the Federal Government representatives cannot renegotiate these contracts until the Federal Court's injunction is lifted.

SUMMARY

We honestly say that the O'Neill Unit is still really needed; despite some hearsay, there is solid evidence of excellent support locally, regionally and statewide for the project; unemployment will be reduced with the construction and operation of the O'Neill Unit; and we water users stand ready to increase our obligations to the United States.

We will be pleased to try to answer any questions.

Thank you.

LIST OF LETTERS, RESOLUTIONS, AND ENDORSEMENTS

Holt County Board of Supervisors, Fred Krugman, Chairman Box 329 O'Neill, NE 68763
Senator John W. DeCamp, 1116 State Capitol Building, Lincoln, NE 68509
Senator Loran Schmit, 2015 State Capitol Building, Lincoln,NE 68509
Senator Howard L. Peterson, 1124 State Capitol Building, Lincoln, NE 68509
Senator Donald L. Wagner, State Capitol Building, Box 41, Lincoln,NE 68509
Senator Maurice A. Kramer, 1415 7th St, Aurora, NE 68818
Robert L. Raun, Department of Agriculture Box 94947 Lincoln, NE 68509
Edward M. Gleeson, Mayor City of O'Neill 401 E. Fremont O'Neill, NE 68763
Robert Malone, Mayor City of Ainsworth Box 165 Ainsworth, NE 69210
Wilford Leach, Brown County Commissioner 138 E. 6th Ainsworth, NE 69210
J. Michael Jess, Director Department of Water Resources Box 94676 Lincoln, NE 68509
Roy G. Arnold, U of N Institute of Agriculture and Natural Resources Lincoln, NE 68588
Lee Orton NE Assn. of Resources Dist. Box 81310 , Lincoln, NE 68501
Upper Elkhorn Natural Resources District, Box 365, O'Neill, NE 68763
Lower Niobrara Natural Resources District, Box 350, Butte, NE 68722
Middle Niobrara Natural Resources District, 526 East 1st. Valentine, NE 69201
Bostwick Irrigation District, Box 446, Red Cloud, NE
Tri-Basin Natural Resources District, 1308 2nd, Box 528, Holdrege, NE 68949
Upper Loup Natural Resources District, Box 212 , Thedford, NE 69166
Lower Big Blue Natural Resources District, Box 826, Beatrice, NE 68310
Loup Basin Reclamation District, Farwell, NE
Ainsworth Irrigation District, Ainsworth, NE 69210
Julius D. Cronin, 118 N. 5th , O'Neill, NE 68763
Robert B. Crosby, 134 South 13th Street, Suite 400, Lincoln, NE 68509
Wm. S. Mattern, President O'Neill Production Credit Association Box 330, O'Neill,NE 68763
John C. Watson, President First National Bank O'Neill, NE 68763
George A. Janousek, Vice President First National Bank, O'Neill, NE 68763
Daniel R. Ewers, Asst. Vice President First National Bank , O'Neill, NE 68763
David L. Draeger, First National Bank, Atkinson, NE 68713
Burns McCulloh, Holt County Independent, Box 360, O'Neill, NE 68763
James Schatz, Chairman Ainsworth Planning Commission, Ainsworth, NE 69210
Lloyd Waldo, Waldo Insurance Agency, Box 548, O'Neill, NE 68763
James Falk, Administrator, O'Neill Senior Citizens Home, Box 756, O'Neill, NE 68763
Boyd W. Strope, Attorney at Law, Box 858, O'Neill, NE 68763
R.T. Amis, President, Missouri Valley Machinery Co. 401 N. 12th St., Omaha, NE
Maurice Moen, Manager Cargill, Inc. Box 724, O'Neill, NE 68763
Steven G. Seglin 134 South 13 St., Suite 400, Lincoln, NE 68508
Virgil L. Laursen Box 276, O'Neill, NE 68763
Robert D. Clements, Clements Outdoor Advertising, Box 67, O'Neill, NE 68763
Mr. & Mrs. Reginald Pinkerman, Pinkerman's TV and Radio RR 1, Box 4, O'Neill, NE 68763
Paul F. Seger, President, Seger Grain, Inc. Atkinson, NE 68713
C.R. Hill, Hill's Christmas Tree Farm, Box 208, O'Neill, NE 68763
F.H. Shiffermiller, M.D. Zero and Harrington St.,Ainsworth, NE 69210
J.B. Grady, President, O'Neill National Bank, Box 470, O'Neill, NE 68763

Ronald M. Shonka , Shonka Real Estate, Box 528, O'Neill, NE 68763
Green Valley Employees Atkinson, NE 68713
O'Neill Chamber of Commerce , Jack Henderson, President 125 N. 4, O'Neill, NE 68763
Greater Omaha Chamber of Commerce, Frank D. McMullen, Jr., President, Omaha, NE 68102
City of Ainsworth, Box 165, Ainsworth, NE 69210
Niobrara River Basin Development Assn. 1206 E 1st. St., Ainsworth, NE 69210
Nebraska Livestock Feeders Assn., 1620 M STreet, Lincoln, NE 68508
Sandhills Rod & Gun Club, Ainsworth, NE 69210
Dale T. O'Connell, Pastor 204 E. Everett, O'Neill, NE 68763
Holt County Farm Bureau, Box 762, O'Neill, NE 68763
James F. Torpy, RR. 1, Atkinson, NE 68713
Harold L. Frickel, Atkinson, NE 68713
John H. Albrecht, RR 4, Atkinson, NE 68713
Paul Krugman, 3116 W.D, North Platte, NE 69101
Judy Frickel, Atkinson, NE 68713
Elmer Borer, Atkinson, NE 68713
James T. McDonald Rt. 1, Box 114, O'Neill, NE 68763
Robert E. Miles , Box 385, O'Neill, NE 68763
Kendall Smith , Box 237, Atkinson, NE 68713
Howard S. Carr, Springview, NE 68778
Mrs. Helen Redies, Springview, NE 68778
Steve Langan, Atkinson, NE 68713
Mick Heiss, Page, NE 68766
C.W. Ripley, Springview, NE 68778
Mr. & Mrs. Boyd Boelter, Rt 1, Inman, NE 68742
Joanne M. Southern , Box 34, O'Neill, NE 68763
Werner Poessnecker, Atkinson, NE 68713
Mr. & Mrs. Jim Ripley, Springview, NE 68778
Dale Wickham, 1117 Dwyer Ct., O'Neill, NE 68763
Jeff S. Garrett, Box 399, O'Neill, NE 68763
H. Duane McCormick , Springview, NE 68778
Walter B. Johnson, Page, NE 68766
Paul Poessnecker Rt. 4, Atkinson, NE 68713
Clarence A. Lewis Jr., 120 W. 19, Grand Island, NE 68801
Lewis Coker, O'Neill, NE 68763
Nellie Davison, Ainsworth, NE 69210
William Gudgel, Johnstown, NE 69214
Janice Pennington, 128 N. Harrington, Ainsworth, NE 69210
Lyle E. Williams, 1105 South 1st Ave, Broken Bow, NE
Dale Roberts and Rose M. Roberts, Ancar Rt., O'Neill, NE 68763
Harvey Krugman, 619 E. Benton, O'Neill, NE 68763
Mary Lowery, 115 S. 1st St., O'Neill, NE 68763
Vernon Albrecht, Rt. 4, Atkinson, NE 68713
Jerry Ries, Box 399, O'Neill, NE 68763
James Crumly, Page, NE 68766
Marvin Ziska , Ancar Rt., O'Neill, NE 68763
Wynn and Judy Roberts, O'Neill, NE 68763
Mrs. Alma Nelson , 2132 East 23rd ST., Tulsa , OK
Carrol H. McKay, Box 330, O'Neill, NE 68763
Mr. & Mrs. Ben Asher, 621 N. 1,O'Neill, NE 68763
Mr. & Mrs. Eldon Morrow, 352 N. Cedar, Ainsworth, NE 69210
Keith Thomas , RR. 1, Box 137 M., O'Neill,, NE 68763
Gary R. Witt, Ainsworth, NE 69210
Robert J. Young, Opportunity Rt., O'Neill, NE 68763
Bonnie Daniels, Box 241, Long Pine , NE 69217
Mr. & Mrs. Ernest Ruther, Springview, NE 68778
Mike Flynn, Ainsworth, NE 69210
Allen R. Christenson, RR 1, Box 122, O'Neill, NE 68763
James A. Heimes, Box 399, O'Neill, NE 68763
D.C. Evans , Box 38, Springview, NE 68778
Ralph D. Johnson, South Star Rt. , Ainsworth, NE 69210
Paul Zakrzewski, O'Neill, NE 68763
Ralph Schipporeit, RR. 1, Box 69, Ainsworth, NE 69210
Mr. & Mrs. Ray Elsbury, Atkinson, NE 68713
Marvin Hart, North Star Rt., Long Pine, NE 69217
Fred Krugman, Opportunity Rt., Box 106, O'Neill, NE 68763
Jim Passyka, North Ash, Ainsworth, NE 69210
Clayton Goeke, RR 1, Atkinson, NE 68713
Frank Lambert, Box 330, O'Neill, NE 68763
James & Marie Larson, Box 208, Springview, NE 68778
Harlin Welch , 564 North Walnut , Ainsworth, NE 69210
Tom Mundorf, Rt. 3, Springview, NE 68778
E.W. Davis, Ainsworth, NE 69210
Randy & Diane Rentschler, Atkinson, NE 68713
Conrad Frickel, Atkinson, NE 68713
Norris George, Ancar Rt., O'Neill, NE 68763
Blanche Ziska, Ancar Rt., O'Neill, NE 68763
Dennis Kliment, Rt. 4, Atkinson, NE 68713
Donald Holtgrew, Star Rt. 4, Atkinson, NE 68713

John F. Magree, 2310 West Oklahoma Ave., Grand Island, NE 68801
Edna Carr , RR, Springview, NE 68778
Emory Bergh , RR 1, Box 204, Plainview, NE 68769
Russ Miner, O'Neill, NE 68763
Gustav Thieszen , Henderson, NE 68371
F. H. Carr, Springview, NE 68778
Mr. & Mrs. Raymond Harmon, Page, NE 68766
Greg Wettlaufer, Page, NE 68766
Nadine Strivens, Box 399, O'Neill, NE 68763

RESOLUTION OF NIOBRARA BASIN IRRIGATION DISTRICT

RESOLUTION
AGREEING TO RENEGOTIATE
CONTRACT NO. 14-06-700-8395
FOR REPAYMENT OF O'NEILL UNIT DISTRIBUTION WORKS

WHEREAS, the Niobrara Basin Irrigation District, herein called the Irrigation District, is organized and exists pursuant to the laws of the State of Nebraska; and

WHEREAS, the Irrigation District includes the irrigable lands of the O'Neill Unit, Nebraska, Pick-Sloan Missouri Basin Program; and

WHEREAS, the Irrigation District executed Contract No. 14-06-700-8395, the 18th day of May, 1976 with the United States of America to pay the construction costs of the distribution works of the O'Neill Unit based on January 1975 costs; and

WHEREAS, the cost of the O'Neill Unit has increased about fifty (50) percent since the Irrigation District executed that contract.

NOW, THEREFORE, we directors of the Niobrara Basin Irrigation District do respectfully request the United States of America that Article 4.a., page 6, Contract No. 14-06-700-8395 be amended to read "$34,804,000".

BE IT FURTHER RESOLVED that this Resolution is not intended nor shall any effort be made by any parties to amend other Articles or other parts of Article 4.a. of Contract No. 14-06-700-8395.

Moved to adopt by Howard Carr. Seconded by Alfred Drayton.

Voting "Yes": Carr and Drayton.

Voting "No": None.

Absent and not voting: Paul Zakrzewski

Resolution adopted at the regular March 16, 1981 meeting of the Niobrara Basin Irrigation District.

Alfred T. Drayton
President

ATTEST:
(SEAL)

Paul F. Zakrzewski
Secretary

NIOBRARA BASIN IRRIGATION DISTRICT—ALTERNATIVES STUDY

O'NEILL UNIT AND CARNS PUMP DIVERSION

1. The Carns Pump Diversion plan is only 45,000 acres - 32,000 acres less than the O'Neill Unit. Carns B.C. ratio 1.54 to 1.00 the O'Neill Unit 1.52 to 1.00 - These are very close but the 32,000 acres that Carns would drop would have 1.49 to 1.00. Carns would be very much like dropping a project the size of the Ainsworth project along with all its benefits to the local, state and nation.

2. Carns has no recreation, fish and wildlife benefits. The O'Neill Unit has a very generous plan for all, including 15,000 acres for wildlife, 800 acres developed for camp grounds, boat docks, etc.

3. The Carns Pump Diversion Alternative would have no water for 8,000 acres near Springview.

4. Carns would drop all it's water at the west side of the O'Neill Unit project lands where it is least needed.

5. The reclamation and irrigation district boundaries would have to be changed.

6. New repayment contracts would be needed.

7. The O'Neill Unit is authorized. The Carns is not and would require many years if it could ever be authorized.

8. Carns would require new water rights with less priority.

9. The O'Neill Unit will recharge 22,000 acres - Carns 10,000.

10. The Carns Alternative would be short of water 7.2% of the years, O'Neill short 2%.

11. Carns would leave less water in the river for downstream irrigators.

12. Carns O M & R would be over 50% higher.

13. An increase in O M & R would reduce the farmers ability to repay construction costs.

14. Carns, in lifting the water 370 feet, would use over eight times as much electric power as the O'Neill Unit.

15. No doubt the Niobrara River's Spring ice jams will go over and damage the proposed 10 feet high Carns dam.

16. Even with a stilling basin, floating grit will still reach the pumps and cause excessive wear increasing O M & R.

Near the bottom of page 75 of the Alternative Study -

	O'Neill Unit		Carns		
Total Annual Equivalent	12640	-	7275	=	5365
Annual Benefits ($1000) Irrigation Direct	19193	-	11216	=	7977
B.C. for the 32,000 acres not to be served by the Carns Diversion	7977	÷	5365	=	$1.4868

JOINT STATEMENT OF CLINTON VONSEGGERN, CHAIRMAN, AND DAYLE WILLIAMSON, EXECUTIVE SECRETARY, NEBRASKA NATURAL RESOURCES COMMISSION

Senator Hatfield and members of the subcommittee, we appreciate the opportunity to present our view on appropriations for Nebraska projects and federal agency activities for fiscal year 1984. This statement is presented in behalf of the Natural Resources Commission, the Nebraska State Agency responsible for long-range water planning.

We are pleased to report that Nebraska is taking on an ever increasing role in resource planning and management. We have teamed our state agency efforts with the efforts of the Nebraska Legislature in developing water policy. We have made sound progress in the past five years. During this same time period we have also taken a hard look at our ability to plan, design, finance, and construct water projects. We must candidly report to you that at this point the state of Nebraska has not developed this capability. We are very much aware of the trend to shift more responsibility to the states. We agree with that general philosophy but we are here to urge you as members of Congress to consider a more gradual transition and we request continuing service from federal agencies and financial support for projects and activities that have been initiated. States of course look to sources of revenue very similar to federal sources. We are finding it most difficult to rapidly initiate new taxes at the state level to supplement programs that have been historically supported by the federal government.

In relation to projects, we support the funding for the Missouri National Recreation River Project which was authorized by Congress in 1978. This project is a 59 mile stretch of the Missouri river between Gavins Point Dam near Yankton, South Dakota and Ponca State Park, Ponca, Nebraska. This authorized project requires $2.5 million for construction and $200,000 for operation and maintenance for FY 84.

We of course are delighted with the fact that the North Loup Project is under construction. The total project was about 17% complete and the Calamus dam was about 38% complete as of January 1, 1983. This project is located in the Ord-Burwell area of Nebraska and the district office of the Nebraska Unemployment Service located in Grand Island indicated that the Ord-Burwell area was the one and only "bright spot" in the 22 county area of central Nebraska that the office served. Unemployment in that area was only 2.4% while unemployment in the surrounding counties ranged much higher. In addition to creating jobs, the project has already stimulated the private investment and development. Immediately downstream from the Calamus dam site private residential and commercial development is already underway.

We urge continuation of funding for this important project.

The Nebraska Natural Resources Commission has also been a long-time supporter of the O'Neill Unit. Our support dates back to the 1960's when it became very apparent to us that reservation of surface water for agriculture in north-central Nebraska it would be essential for the future. Our convictions are even stronger today. The results of the High Plains - Ogallala Aquifer Study show significant groundwater declines in the O'Neill area by the year 2020 and thus we feel every effort should be made to have a project in place to utilize surface water for this important area of Nebraska.

We support the Bureau of Reclamation request for the Prairie Bend Feasibility Study. This central Nebraska area is experiencing groundwater depletion that will eventually result in severe economic declines in addition to future water quality problems. The feasibility study to provide future options for the area is deemed essential in our efforts at the state level of considering future uses of Platte River water.

We also voice our strong support for the Bureau of Reclamation's and the Natural Resources Commission Platte River Options Study. Public reaction has made it most difficult to develop water projects without the complete understanding which comes from early citizen involvement in decision making. An option study will help our residents better understand possible future courses of action for management of the Platte river system. This study will compliment an ongoing state effort to manage Platte river water resources.

In summary, we have touched on a number of projects and federal services we feel are important to the state of Nebraska in fiscal year 84. We recognize the problem you face with the increasing federal deficit. We feel that the state of Nebraska continues to take positive steps to increase their role and we would ask for your support for funding for the projects and activities we have described today.

Thanks again for the opportunity to present this statement.

PROCLAMATION ISSUED BY GOV. CHARLES THONE OF NEBRASKA

WHEREAS, there has been submitted to the voters of the State of Nebraska, for their approval or rejection, at the regular General Election held on the Second day of November, 1982, proposed by Legislative Bill 577 of the Eighty-Seventh Legislature - Second Session, the following proposition:

> "The following amendment to Article XIII, section 1, of the Constitution of Nebraska -- 'Section 1. The state may, to meet casual deficits, or failures in the revenue, contract debts never to exceed in the aggregate one hundred thousand dollars, and no greater indebtedness shall be incurred except for the purpose of repelling invasion, suppressing insurrection, or defending the state in war, and provision shall be made for the payment of the interest annually, as it shall accrue, by a tax levied for the purpose, or from other sources of revenue, which law providing for the payment of such interest by such tax shall be irrepealable until such debt is paid; Provided, that if the Legislature determines by a three-fifths vote of the members elected thereto that (1) the need for construction of highways in this state requires such action, it may authorize the issuance of bonds for such construction, and for the payment of the interest and the retirement of such bonds it may pledge any tolls to be received from such highways or it may irrevocably pledge for the term of the bonds all or a part of any state revenue closely related to the use of such highways, such as motor vehicle fuel taxes or motor vehicle license fees and (2) the construction of water retention and impoundment structures for the purposes of water conservation and management will promote the general welfare of the state, it may authorize the issuance of revenue bonds for such construction, and for the payment of the interest and the retirement of such bonds it may pledge all or any part of any state revenue derived from the use of such structures; and provided further, that the Board of Regents of the University of Nebraska, the Board of Trustees of the Nebraska State Colleges, and the State Board of Education may issue revenue bonds to construct, purchase, or otherwise acquire, extend, add to, remodel, repair, furnish, and equip dormitories, residence halls, single or multiple dwelling units, or other facilities for the housing and boarding of students, single or married, and faculty or other employees, buildings and structures for athletic purposes, student unions or centers, and for the medical care and physical development and activities of students, and buildings or other facilities for parking, which bonds shall be payable solely out of revenue, fees, and other payments derived from the use of buildings and facilities constructed or acquired, including buildings and facilities heretofore or hereafter constructed or acquired, and paid for out of the proceeds of other issues of revenue bonds, and the revenue, fees, and payments so pledged need not be appropriated by the Legislature, and any such revenue bonds heretofore issued by either of such boards are hereby authorized, ratified, and validated. Bonds for new construction shall be first approved as the Legislature shall provide.'"

AND WHEREAS, it appears by the canvass of the State Board of Canvassers that, at said General Election, 247,607 votes were cast in favor of said measure and 179,550 votes were cast against it; that a majority of the electors voting on said measure adopted it; and that the votes cast in favor of the measure were not less than thirty-five percent of the total votes cast in said election;

THEREFORE, I, Charles Thone, Governor of the State of Nebraska, by virtue of the power vested in me by the Constitution and Laws of the State, DO HEREBY PROCLAIM AND DECLARE the said measure to have been approved by the Constitutional majority by the people voting on this measure and the said amendment now to be in full force and effect as a part of the Constitution of the State of Nebraska.

IN WITNESS WHEREOF, I hereunto subscribe my name and cause to be affixed the Great Seal of the State of Nebraska this 29th day of December, One Thousand Nine Hundred and Eighty-Two.

STATEMENT OF STATE SENATOR JOHN DECAMP OF NEBRASKA

Dear Senator Hatfield:

Last year I appeared to testify before your committee on behalf of continuing appropriations for the O'Neill Unit reclamation project in North-central Nebraska. I am not able to travel to Washington later this month or in early April to again testify this year because of the heavy schedule in the Nebraska Legislature. However, I am writing to express my support for continued funding for the O'Neill project, as well as my concern about the dire results that are projected to occur in the area should the O'Neill project not be completed.

As the State Senator representing most of the O'Neill project area in Nebraska's Unicameral Legislature, I am aware of the overwhelming support there is locally by the people of the area for the O'Neill project. In 1979, the local people voted twice by margins of 78% approval, in support of the project. Because of the continued decline in ground water levels, and with the growing awareness of the importance of this project, I believe that there would be even greater support for the project locally today.

I know that you have had considerable expert testimony in the past about the importance and significance of the O'Neill project; and that you will be receiving more from other witnesses this year. Combined with the considerable data, studies, research, engineering, and hydrologic, geologic and other scientifically expert information provided by federal and state agencies over the years, the record of need and support for the O'Neill project should be firmly established with the Congress.

The loss of the O'Neill project would have dire consequences in the years ahead; and considering the current state of the economy and high unemployment, the additional benefits of thousands of jobs and increased economic activity should be welcomed by the Congress.

I strongly urge you, your committee, and the United States Congress, to continue funding for this important project.

PROJECT DATA SHEET

PF-45 (1-80)
Bureau of Reclamation

REGION
Lower Missouri

PROJECT AND STATE
PICK-SLOAN MISSOURI BASIN PROGRAM
O'NEILL UNIT, NEBRASKA

AUTHORIZATION
Public Law 92-514, October 20, 1972

LAND CERTIFICATION
March 29, 1976

DEFINITE PLAN REPORT
Approved March 24, 1977

Completion Date	% Complete	Date
1994 1/	2	1/1/83

BENEFIT COST RATIOS

Based on Direct Benefits	Based on Total Benefits	Date
1.5 2/	1.8 2/	10/1/83

SUMMARIZED FINANCIAL DATA

Total Federal Obligations (Reclamation) 13/	$367,050,000
Total Federal Obligations (Other)	---
Net Property and Other Transfers	1,350,000
Cash Advances--Non-Federal	---
Adjustment 3/	2,814,000
Total to be Allocated	$371,214,000

Allotments to September 30, 1982	$ 6,439,226
Allotments for FY 1983	---
Allotments to Date	6,439,226
Allotments Required for FY 1984	1,570,000
Balance to Complete after FY 1984	$359,040,274

ALLOCATIONS 4/

Irrigation	$352,023,000
Power	
M & I Water	
Recreation	8,708,000
F & WL	5,093,000
Flood Control	1,275,000
Other 5/	4,115,000
Total	$371,214,000

REPAYMENT

Amount Repaid by Irrigators 6/	$ 45,245,000
Amount Repaid by Power 7/	306,778,000
Amount Repaid by M & I Water	
Reimbursable Recreation and F&WL 8/	3,571,000
Nonreimbursable 9/	15,620,000
Total	$371,214,000

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$4,572
Repayment of Investment per Acre:	
By Irrigators	588
By Power Revenues	3,984
By M & I Water Users	

Payment Capacity per Acre 10/	$20.40
Annual Charges:	
O & M	12.74
Construction	11.30
Total	$24.04

STATUS OF REPAYMENT CONTRACT: Repayment contract with the Niobrara Basin Irrigation District and water service contract with the North Central Nebraska Reclamation District executed May 18, 1976, and validated April 9, 1980. 11/ Cost-sharing agreement with the North Central Nebraska Reclamation District covering recreation and fish and wildlife cost is scheduled for March 1984. 12/

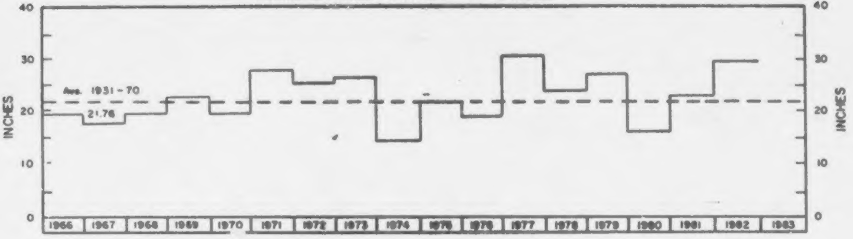
STATUS OF NEPA COMPLIANCE: Projectwide environmental statement was filed with Council on Environmental Quality, September 22, 1972. First supplement filed with the Environmental Protection Agency on June 16, 1978. Second Supplement filed with the Environmental Protection Agency July 24, 1981.

DESCRIPTION: The project is located in north-central Nebraska within the Niobrara River Basin and will serve the functions of irrigation, recreation, fish and wildlife, and flood control. Diversion and storage facilities are located in Brown, Cherry, and Keya Paha Counties with irrigable lands in Holt and Keya Paha Counties. The major feature is Norden Dam and Reservoir on the Niobrara River. Water will be provided to 77,000 acres of irrigable land. Corn, alfalfa, hay, and wheat are the principal crops that are presently grown. A higher proportion of corn is expected with application of project water.

GPO 851-362

BR-251

ANNUAL PRECIPITATION AT O'NEILL

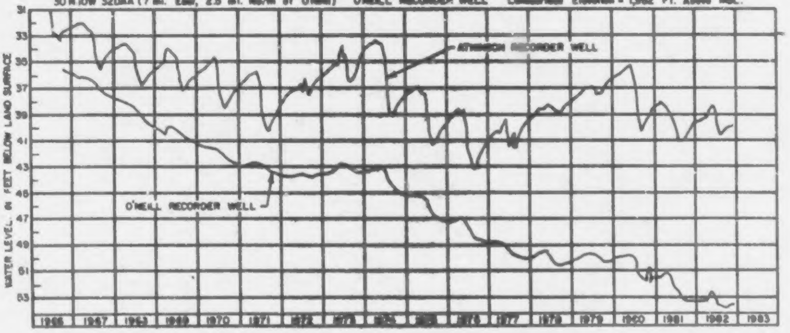


SOURCE : N.O.A.A.

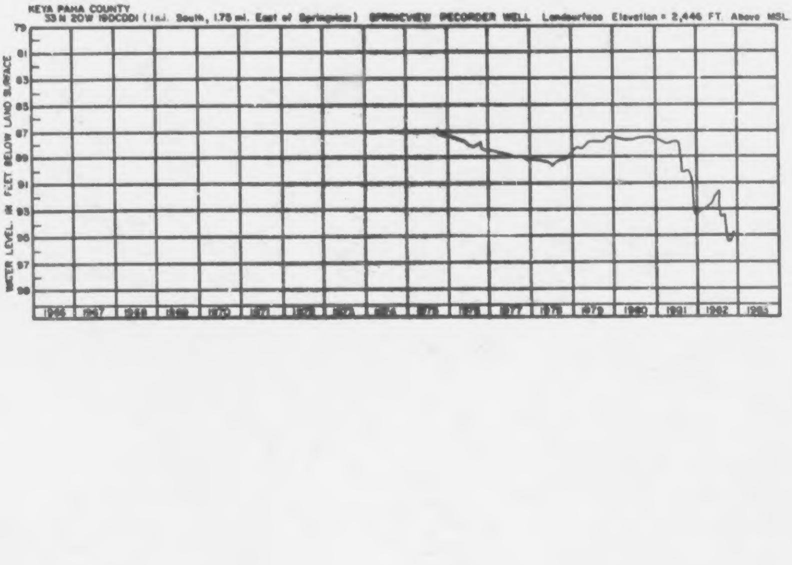
GROUNDWATER LEVELS

SOURCE : U.S.G.S.

HOLT COUNTY
31 N 14W 27DDD (2 mi. East, 6 mi. North of Atkinson) ATKINSON RECORDER WELL Landsurface Elevation = 2,080 FT. Above MSL.
30 N 10W 32DAA (7 mi. East, 2.5 mi. North of O'Neill) O'NEILL RECORDER WELL Landsurface Elevation = 1,962 FT. Above MSL.



KEYA PAHA COUNTY
33 N 20W 19DCDD1 (1 mi. South, 1.75 mi. East of Springview) SPRINGVIEW RECORDER WELL Landsurface Elevation = 2,446 FT. Above MSL.



HOLT COUNTY, NEBR.—CERTIFICATION OF ELECTIONS

STATE OF NEBRASKA)
)ss.
COUNTY OF HOLT)

I, Gary Devall, County Clerk of Holt County do hereby certify that elections were held on June 1, 1979 and December 15, 1979 with the following results:

NORTH CENTRAL NEBRASKA RECLAMATION DISTRICT-June 1, 1979.

FOR THE WATER SERVICE AND OPERATION AND MAINTENANCE OF WATER SUPPLY WORKS CONTRACT-1294 (votes)

AGAINST THE WATER SERVICE AND OPERATION AND MAINTENANCE OF WATER SUPPLY WORKS CONTRACT-385 (votes)

NIOBRARA BASIN IRRIGATION DISTRICT-December 15, 1979.

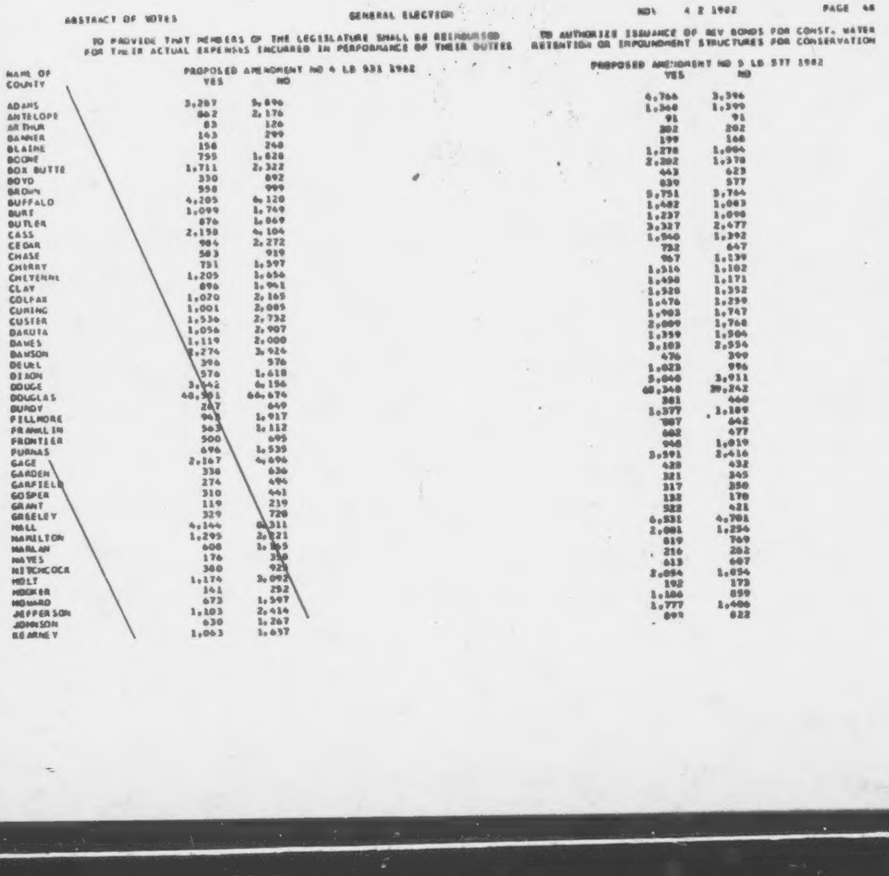
FOR APPROVAL OF CONTRACT FOR WATER SUPPLY-151 (votes)

AGAINST APPROVAL OF CONTRACT FOR WATER SUPPLY-43 (votes)

Witness my hand and Official Seal this 25th. day of March, 1983.

Gary Devall
Holt County Clerk

CERTIFICATION OF ELECTION RESULTS



ABSTRACT OF VOTES GENERAL ELECTION NOV 4 2 1982 PAGE 48

TO PROVIDE THAT MEMBERS OF THE LEGISLATURE SHALL BE REIMBURSED FOR THEIR ACTUAL EXPENSES INCURRED IN PERFORMANCE OF THEIR DUTIES

TO AUTHORIZE ISSUANCE OF REV BONDS FOR CONST. WATER RETENTION OR IMPOUNDMENT STRUCTURES FOR CONSERVATION

NAME OF COUNTY	PROPOSED AMENDMENT NO 4 LB 931 1982		PROPOSED AMENDMENT NO 5 LB 577 1982	
	YES	NO	YES	NO
ADAMS	3,267	5,896	4,766	3,396
ANTELOPE	862	2,176	1,360	1,399
ARTHUR	83	126	91	91
BANNER	143	299	202	202
BLAINE	158	248	199	168
BOONE	755	1,628	1,278	1,004
BOX BUTTE	1,711	2,322	2,202	1,378
BOYD	330	892	443	623
BROWN	558	999	839	577
BUFFALO	4,205	6,120	5,751	3,764
BURT	1,099	1,749	1,482	1,083
BUTLER	876	1,869	1,237	1,098
CASS	2,158	4,104	3,327	2,477
CEDAR	984	2,272	1,940	1,392
CHASE	583	919	732	647
CHERRY	731	1,597	967	1,139
CHEYENNE	1,205	1,656	1,516	1,102
CLAY	896	1,961	1,450	1,171
COLFAX	1,020	2,165	1,320	1,352
CUMING	1,001	2,005	1,476	1,239
CUSTER	1,536	2,732	1,903	1,747
DAKOTA	1,056	2,907	2,009	1,768
DAWES	1,119	2,000	1,359	1,504
DAWSON	[illegible],274	3,926	3,103	2,554
DEUEL	396	576	476	399
DIXON	576	1,618	1,023	996
DODGE	3,[illegible]42	6,196	5,040	3,911
DOUGLAS	48,[illegible]91	66,674	68,348	39,242
DUNDY	2[illegible]7	649	281	460
FILLMORE	96[illegible]	1,917	1,377	1,109
FRANKLIN	563	1,112	787	642
FRONTIER	500	695	602	477
FURNAS	696	1,535	968	1,019
GAGE	2,167	4,696	3,591	2,416
GARDEN	338	636	428	432
GARFIELD	274	494	321	345
GOSPER	310	441	317	350
GRANT	119	219	132	170
GREELEY	329	728	522	421
HALL	4,144	[illegible],311	6,531	4,701
HAMILTON	1,295	2,[illegible]21	2,001	1,254
HARLAN	608	1,[illegible]95	819	769
HAYES	176	35[illegible]	216	262
HITCHCOCK	380	92[illegible]	613	607
HOLT	1,174	3,09[illegible]	2,054	1,654
HOOKER	141	252	192	173
HOWARD	673	1,597	1,186	859
JEFFERSON	1,103	2,414	1,777	1,486
JOHNSON	630	1,267	809	822
KEARNEY	1,063	1,637		

			1,460	966
KEITH	1,195	1,771	1,536	1,187
KEYA PAHA	173	357	260	236
KIMBALL	634	972	854	667
KNOX	928	2,268	1,455	1,483
LANCASTER	29,104	34,180	32,402	23,929
LINCOLN	4,177	6,625	5,363	4,261
LOGAN	127	262	175	191
LOUP	127	214	158	144
MADISON	2,636	5,574	6,056	3,261
MC PHERSON	93	200	97	160
MERRICK	831	1,753	1,211	1,086
MORRILL	625	1,294	966	735
NANCE	445	948	787	547
NEMAHA	1,070	1,813	1,501	1,139
NUCKOLLS	768	1,531	1,159	805
OTOE	1,761	3,099	2,479	1,030
PAWNEE	427	1,006	665	624
PERKINS	641	729	700	533
PHELPS	1,323	2,111	1,768	1,322
PIERCE	698	1,693	1,060	1,159
PLATTE	2,691	5,987	4,198	3,539
POLK	795	1,397	1,098	904
RED WILLOW	1,019	2,683	1,649	1,784
RICHARDSON	1,124	2,785	1,731	1,032
ROCK	511	517	334	421
SALINE	1,540	2,622	2,141	1,636
SARPY	7,329	9,902	30,638	5,361
SAUNDERS	2,190	3,892	3,092	2,522
SCOTTS BLUFF	3,025	5,988	5,198	3,286
SEWARD	1,977	2,897	2,529	1,934
SHERIDAN	757	1,535	992	1,091
SHERMAN	406	1,092	685	675
SIOUX	204	485	324	359
STANTON	556	1,278	882	844
THAYER	849	1,875	1,427	1,001
THOMAS	164	259	171	212
THURSTON	481	1,336	712	1,001
VALLEY	577	1,393	963	850
WASHINGTON	1,642	2,772	2,361	1,867
WAYNE	880	1,862	1,302	1,133
WEBSTER	582	1,215	906	715
WHEELER	126	277	191	179
YORK	1,591	2,904	2,360	1,750
TOTAL	178,569	309,499 =====	267,657 =====	179,550

RESOLUTION OF NORTH CENTRAL NEBRASKA RECLAMATION DISTRICT

RESOLUTION
AGREEING TO RENEGOTIATE
CONTRACT NO. 14-06-700-8395
FOR REPAYMENT OF O'NEILL UNIT DISTRIBUTION WORKS

WHEREAS, The North Central Nebraska Reclamation District, herein called the Reclamation District, is organized and existing pursuant to the laws of the State of Nebraska; and

WHEREAS, the Reclamation District includes the irrigable lands of the O'Neill Unit, Nebraska, Pick-Sloan Missouri Basin Program and the irrigable lands of the Niobrara Basin Irrigation District; and

WHEREAS, the Niobrara Basin Irrigation District executed Contract No. 14-06-700-8395, the 18th day of May, 1976 with the United States of America to pay the construction costs of the distribution works of the O'Neill Unit based on January 1975 costs; and

WHEREAS, the cost of the O'Neill Unit has increased approximately fifty (50) percent since the Niobrara Basin Irrigation District executed that contract.

NOW, THEREFORE, We, directors of the North Central Nebraska Reclamation District do firmly resolve that the directors of the Niobrara Basin Irrigation District renegotiate Article 4.a. of Contract No. 14-06-700-8395 by increasing to $34,804,000 the amount to be paid the United States of America.

BE IT FURTHER RESOLVED, that this Resolution is NOT intended nor shall any effort be made by any parties to amend Contract No. 14-06-700-8394 between the United States of America and the North Central Nebraska Reclamation District.

Moved to adopt by Robert Young. Seconded by Louis Kliment.

Voting "Yes": Drayton, Evans, Kliment, Roberts, Janousek, Young and Gokie.

Voting "No": None.

Resolution adopted at the regular March 16, 1981 meeting of the directors of the North Central Nebraska Reclamation District.

STATEMENT OF RONALD M. SHONKA, O'NEILL, NEBR.

Dear Senator Hatfield:

As resident, farmer, and agribusinessman from the North Central Nebraska area, I am writing to you asking your support for the O'Neill Unit.

The O'Neill Unit is extremely important for our area due to falling water tables from existing irrigation wells. It's contruction would enhance the local, state, and national economy with many long term benefits.

Several conservation groups have concentrated their opposition to this reclamation project as a precedent setting goal. If they can stop the O'Neill project, then future projects in other areas become an easier target.

Alternate plans to the O'Neill Unit are being offered by the opposition groups that are obvious to everyone with even limited practical knowledge of the area, to be totally unworkable. These are not alternate plans, only a ruse to scuttle the entire project. The latest so called alternate plan would require hundreds of irrigation wells along an area of river frontage that does not have the water available to begin with, then calling for pumping the water over a large bluff at an unbelievable cost in energy. This type of alternate plan is totally unworkable and an insult to the intelligence of the farmers, supporters, Bureau of Reclamation, and the public in general.

Our country has invested millions of dollars, years of study, and called on some of the finest engineers in our country's service to design a practical energy efficient project that will faithfully serve the people for centuries to come. Let us please use the good common sense that God gave most of us to put this project to work.

RESOLUTION OF AINSWORTH IRRIGATION DISTRICT

WHEREAS, the Norden Dam O'Neill Project is being considered for continued funding for construction by the appropriations committee, and

WHEREAS, alternatives that have been suggested for study by some opponents of the Norden Dam O'Neill Project, and

WHEREAS, none of those aternatives have proven to be feasible alternative, and

WHEREAS, delays in this Project have only added more expense to the construction of this Project without rightful justification, and

WHEREAS, this Project has been delayed to long and the time to move ahead on this Project is now and we urge no further delays.

NOW, THEREFORE BE IT RESOLVED, by the Board of Directors of the Ainsworth Irrigation District, at their regular monthly board meeting, held March 15, 1983, that they go on record in support of the Norden Dam O'Neill Project and urge you to support continued funding for this Project.

Dated this 15th. day of March 1983.

Board of Directors of the Ainsworth
Irrigation District

Donald E. Zwiebel
Donald Zwiebel, President

Brent Johnson
Brent Johnson, Vice-President

Danny Moody
Danny Moody, Secretary-Treasurer

STATEMENT OF CLYDE BURDICK, PRESIDENT, NIOBRARA RIVER BASIN DEVELOPMENT ASSOCIATION

Dear Senator Hatfield:

During the past decade the National and World wide increases in population with the corresponding increase in the demand for food and agricultural products have placed growing stress upon one of our most important natural resources, water. These stresses are on the free flowing streams and the ground water.

The stresses that have in recent years become apparent will surely accelerate as the population increases and the demands for food, agricultural products and other uses grow. It is therefore of great importance that we carefully plan and develop water projects to conserve and to make the most beneficial use of the available water supply to ensure its proper use in the future.

Much of Nebraska is underlain by the Ogallala Aquifer, a vast underground reservoir. Overlying this is a mantel of sandy soil that absorbs the rain as it falls. As the Aquifer fills it releases water to the streams and the excess water flows into the Missouri River and is wasted into the Gulf of Mexico. Water pumped from the Aquifer is lost to evaportation, transpiration and some is returned to the soil in the practice of irrigation.

The O'Neill Irrigation Project which has been authorized by Congress for construction by the Bureau of Reclamation has been planned and designed to meet those needs. It has a very favorable benefit cost ratio. It is a sound investment for both the local people who will share in the repayment of costs and the Federal Government who will receive the benefit of increased tax returns and support for the National economy.

Funds for the project are included in the President's proposed budget and we urge your support for continued funding and construction of the O'Neill unit, a part of the Missouri River Basin Project.

STATEMENT OF ROY G. ARNOLD, VICE CHANCELLOR, UNIVERSITY OF NEBRASKA

Dear Senator Hatfield:

I understand that your subcommittee will soon be conducting hearings for the O'Neill Unit reclamation project.

The University of Nebraska does not have an official position regarding this project. The procedure for review of the proposed project is thorough and complex. It appears that the project's technical and economic feasibility and its impact on the economy, the environment, and the citizenry of the region are being addressed in the review and approval process.

The development and wise use of the state's water resources are vital to the economic and social well-being of the people of Nebraska. Nebraska's growth in irrigated acres during the past 15 years has been phenomenal, increasing from 2.9 million acres in 1965 to over 7 million acres at this time. The O'Neill Unit reclamation project would enhance the further development of Nebraska's water resources and contribute to the state's economy.

We need to make effective and efficient use of both our surface and ground water resources in Nebraska. Faculty in the Institute of Agriculture and Natural Resources presently are directing several research and extension projects aimed at improving our irrigation efficiency. Currently, nearly six of every seven acres irrigated in Nebraska are dependent upon wells using ground water, with only one of every seven acres irrigated from surface water sources. We need to find ways to use off-season high flows in our streams and rivers through water storage systems for irrigation, for ground water recharge, and for recreation and wildlife habitat improvement.

STATEMENT OF STATE SENATOR LORAN SCHMIT OF NEBRASKA

Dear Mr. Chairman:

As Chairman of the Nebraska Unicameral's Public Works Committee, I am again writing to support the appropriations for the O'Neill Unit reclamation project, and to urge you, your committee, and the U. S. Congress to continue to support this project for its earliest possible completion.

From press acounts, I am aware of the recent efforts of some members of Congress to attempt to kill this important project. I can only say that those people do not understand our situation in Nebraska, or the importance of irrigation to the maintenance of our family farm operations. I have spent years studying this project, even though it is not in my legislative district, and I know that those who oppose the project, including the few people in our state, either do not understand it or are people who have consistently been opposed to surface water projects including dams for water conservation.

Others you have heard from in the past, and will be hearing from this year and in the future, are providing expert testimony and scientific background and support for this project. I won't be redundant with similar information, but I wanted you and your committee to be aware of the support this project enjoys not only in the local area, but among the government leaders of the state, particularly those involved in the administration and management of our important agriculture, water, and natural resources programs.

The Public Works Committee of the Nebraska Legislature is the committee that deals with legislation, policy, programs, and issues involving water resources. As such, we are in the position of most readily being able to understand and appreciate the importance and need for a project such as the O'Neill Unit.

I can't stress too much the need for this project to ensure the economic viability of a large area of the State of Nebraska. I respectfully urge your committee and the U. S. Congress to continue the appropriations for this important project.

I am aware of your support and that of other members of the committee in the past, and I thank and congratulate you for that past support. Too few people in this day and age have the courage and determination to look to the future and to act for what they know is in the best interest of the country.

STATEMENT OF PAUL A. MANN, GENERAL MANAGER, UPPER ELKHORN NATURAL RESOURCES DISTRICT

Dear Sir:

I am writing to you on behalf of the Upper Elkhorn Natural Resources District, regarding the appropriation of the O'Neill Unit. The O'Neill Unit has one of the best benefit cost ratios of any project being considered for construction in the United States.

The Upper Elkhorn Natural Resources District realizes many benefits for the people of Nebraska that will be obtained from the proposed O'Neill Unit. Our District Board of Directors has gone on record unanimously supporting the project, as is proposed by the Bureau of Reclamation. Also the Nebraska Association of Resources Districts, who takes in the whole state of Nebraska when dealing with people who are concerned about our natural resources drew up a resolution on the O'Neill Unit and it passed through our Association with overwhelming support. It has been said that the local support of the project is not seen, but on the contrary local support of the project has always been strong. In 1979 two elections were held to reaffirm repayment contracts, both passed by a 4-1 margin. Also in 1981 the Irrigation District offered by resolution to increase their annual payments by nearly 50 percent: from $11.30/acre to $16.95/acre.

The O'Neill Unit has three profound purposes: irrigation, recreation, and fish & wildlife.

It has been documated by the Ogallala-High Plains Study, that in the area of influence of the O'Neill Project there will be 189,000 acres irrigated by the year 2020, with the project in comparison to 90,000 acres without the project. Today people might not think this increase in irrigation being a real benefit, but looking into the future 50 years, the country will need the extra food, and water created by the project.

Recreation on the Niobrara River as is today is quite minimal, now it is limited to canoeing. With the project, the Norden Reservoir will be able to accomodate people from all over the state, both young and old, in all aspects of recreation.

One of the biggest benefits that will be received from the project, is groundwater recharge. The need for the O'Neill Unit has been induced by extensive irrigation in the O'Neill Unit area, causing groundwater declines of 1.3 feet per year since 1960. The substitution of surface water for existing and potential future wells development is needed to provide recharge to stabilize groundwater levels. With the O'Neill Unit 22,000 acres will be benefitted from groundwater recharge.

The Upper Elkhorn Natural Resources District Board of Directors realize the present and future needs of the local people and the State of Nebraska, of which will be accomplished by the O'Neill Unit Project.

For the reasons stated the Upper Elkhorn Natural Resources District strongly supports the project and reccommends continued funding of the project on the Federal Government level and construction of the O'Neill Unit.

STATEMENT OF PAUL JOHNSTON, EXECUTIVE VICE PRESIDENT, NEBRASKA LIVESTOCK FEEDERS ASSOCIATION

Dear Senator Hatfield:

The members of the Nebraska Livestock Feeders Association recognize the need for water in a state like Nebraska. Without water there are no crops, and without crops the feeding of cattle, hogs, and sheep deminish.

We see the water table going down in the Texas panhandle. We see land going back to dryland farming, resulting in less grain for the big Texas feedlots. As the result of less grain in Texas, we have seen an increase in cattle feeding in Nebraska. We want it to continue to grow in our state. Therefore, the following resolution was passed by our 3,100 members at their convention on December 1, 1982:

SURFACE WATER USAGE NR&E-3

WHEREAS, the efficient use of water is of paramount importance to all citizens of Nebraska; and

WHEREAS, millions more acre feet of water leave the State of Nebraska than enter our state each year;

THEREFORE BE IT RESOLVED that the Nebraska Livestock Feeders Association supports and encourages the impoundment and most efficient re-use of surface waters in the State of Nebraska.

BE IT FURTHER RESOLVED that the Nebraska Livestock Feeders Association strongly supports any responsible Reclamation Projects in the State of Nebraska including the North Loup and the Norden Dam projects.

Therefore, please consider the members of the Nebraska Livestock Feeders Association as strong supporters of continued funding and construction of the O'Neill Unit.

STATEMENT OF BURNS E. MCCULLOH, NEWS EDITOR, FRONTIER AND HOLT COUNTY (NEBR.) INDEPENDENT

Dear Sen. Hatfield,

Opponents of the O'Neill Unit have just come up with perhaps their most dangerous ploy in their continuing battle against this much needed irrigation project; needed for our nation's future as well as the future of our area.

The plan by the Nature Conservancy is brilliant in that it is not a delaying tactic, designed to increase costs of the project to the point where an economy-minded Congress would be willing to de-authorize the O'Neill Unit because of increased costs. The Conservancy plan realizes that Congress is looking for bargains and so such a bargain is offered; unfortunately, however, it is a bargain that the nation can not afford, now or in the future.

The Conservancy plan would be built at one-third the price of the O'Neill Unit but would have a life of less than that with no chance of extending that life once well go dry in their proposed wellfield. It would take groundwater at a questionable cost which requires high energy output and would replenish the are in the O'Neill Unit. The O'Neill Unit, however, would give groundwater recharge to the projct area without stealing much needed groundwater from other areas.

Climatologists have predicted that by the end of the original life of the O'Neill Unit, about 150 years, that our state will be entering a very dry period. I believe we should take the Biblical approach outlined by Joseph in Egypt of storing up water now when it is available so it is available when we enter a dry period, rather than squandering our savings now on the whim of a small, vocal group of extremists.

Please vote for continued support for the O'Neill Unit, in terms of authorization and funding, and reject the plan of the Nature Conservancy which you will find, after careful study, is not in the best interests of our country.

STATEMENT OF HARLIN D. WELCH, AINSWORTH, NEBR.

Dear Mr. Hatfield,

The time is now, more then ever, for our Representatives of the United States to discontinue sympathizing with extreme environmental and do-gooder groups. One of the very examples of those groups, is the delays on the Norden Dam O'Neill Project.

I think it is time that you people, as our leaders evaluate those groups that promote no growth in the United States. I agree with Mr. Watt's statement, when he said that we must evaluate as to where these groups come from and where they are leading us.

The Norden Dam O'Neill Project has been studied, re-studied and studied again and there is not doubt in my mind, that if we would turn the time back and if our leaders then would listen to these very same groups, there would not be one Project constructed on the Missouri River, that we have today and Omaha would still be having the floods every year. We'd also be operating with less power that even these groups do not mind enjoying today.

I think it is high time that you leaders join hands and proceed to do what is necessary for the majority of the people, not the minority.

It it more important now, to develope our water resources in the State of Nebraska, then any time in history and in order for us to do that, we need the support of all of our Representatives.

If we let the Norden Dam O'Neill Project be defeated by outside influence and with a small amount of monority groups, then we just as well forget about any other Project in the State of Nebraska. A strong nation is founded and built by the people that produce productivity, not by the people that produce nothing and dictate to those people that do.

Your consideration and decision on this very important Project is going to be determining the future of water developments in the State of Nebraska.

I urge you to support continued funding for the Norden Dam O'Neill Project and I predict that the hold-up in the courts on this Project will soon be resolved and construction can begin and put hundreds of Nebraskans to work that is needed so badly.

Your consideration will be very much appreciated.

Statement of Joanne M. Southern, O'Neill, Nebr.

Dear Sen. Hatfield,

First of all, thank you for your continued support for the O'Neill Irrigation Unit for the past few years; it means a lot to me that the leaders of our country realize the importance of water to insure our nation remains able to supply its own food needs with supplies left over for the needy of the world.

I also wish to ask you for your continued support for the unit, now that it is facing its hardest fight in Congress; the move to kill the project, the stall in the courts which increases the costs to prohibitive levels, and the "wolf in sheep's clothing" option just suggested by the Nature Conservancy.

I have talked with several people knowledgeable in water matters and they have told me that if the O'Neill Unit is not built as currently envisioned that our nation will be in big trouble. If another option, such as the Nature Conservancy plan, is built instead, a smaller version of the O'Neill Unit will be needed. That means more work, years of waiting and increased costs for something whcih should already have been half built.

Please continue to support the project as you have in the past, getting all the information you can on both plans from qualified specialists in hydrology, engineering and other fields. And, more importantly, share that information with other members of Congress so they will realize the necessity and urgency of this project to our nation's future.

Statement of Mr. and Mrs. Ben Asher, O'Neill, Nebr.

Dear Sen. Hatfield,

Congress is once again getting ready to discuss possible funding for the O'Neill Unit, this year with a backdrop of the biggest threat we have faced to date in the life of the project. Indeed, the very life of the project is at stake with effort to de-authorize the Unit and substitute a measure of very quesionable worht, proposed by people of equally dubious interest.

The O'Neill Unit has stood the tests it has been subjected to over the years, including last year's demand that several alternatives be studied. Those were studies and the project, as initially proposed, proved to once again be the best way to go to provide what the peopleand Congress intend: An irrigation project worth the investment.

Do not be swayed by the apparent glamor of the latest alternative, the one suggested by the Nature Conservancy. It is a combination of several of the alternatives rejected last year as not feasible. The old saying that two wrongs don't make a right is very applicable in this case.

I urge you and your colleagues to continue to support the O'Neill Unit, to vote it continued construction funds if that is the desire of sponsors this year, to vote against any effort to de-authorize the project, and to hlep us push for a speedy end to the court tie-up which has held the project up for seven long years.

Thank you for your support of the O'Neill Unit in the past. I look forward to similar support in the future.

LETTER FROM ROBERT MALONE, MAYOR, AINSWORTH, NEBR.

March 15, 1983

Senator J. James Exon
U. S. Senate
3313 Dirksen Building
Washington, D. C. 20510

Dear Senator Exon:

Thank you for your recent letter explaining the most recent turn of events concerning the O'Neill Unit and the construction of the Norden Dam.

First of all I feel the "well field" idea is the poorest compromise that could possibly be made. I have not seen any cost for energy or life cycle costs. It is my feeling over a period of years these costs will far exceed the life cycle costs of the Norden Dam.

Secondly, with as many pumping stations that will be required, I fear for the environment below the river. How will the obvious large fluctuations in water level due to the pumping effect the downstream environment. The environmental impact of the Norden Dam is limited and I feel this may not be.

Third, I agree government must curb spending! However this money will be put into our suffering economy rather than in El Salvador. If government spending is a consideration lets address our problems at home with aid rather than abroad.

In conclusion I feel we must stand firm with no compromise. The idea of the well fields would be as much of a flagrant waste of taxpayers dollars as the amount of our inflated dollar, environmental impact stqtements, and reports that have been submitted since the inception of the O'Neill Unit and the construction of the Norden Dam.

Timothy C Rutledge
Timothy C. Rutledge
Utilities Superintendent

Robert Malone
Robert Malone
Mayor

STATEMENT OF L. COKER, O'NEILL, NEBR.

Dear Sen. Hatfield:

One of the arguments used against the O'Neill Unit today is that it wouldhelp farmers to produce a grain that is already in a surplus condition. Surplus for how long? Less than 10 years ago corn was in short supply on the world market. World grain reserves were dangerously low and dry conditions threatened for the firsttime in many years to put our world in a grain-short position worldwide.

Irrigation in our area in that time period assured our producers of a crop that year, allowing them to take advantage of corn selling for $3.50 a bushel. To the east, under irrigation, soybeans hit a top of $10 a bushel. Without irrigation our area would have been as hard-hit as the rest of the world, goin into deeper debt in an effort to stay afloat one more year;

a hand to mouth existence at best and a losing proposition most of thetime. That is what we had in our area before the advent of irrigation and I would hate to see it happen again just because members of Congress from a non-farm area, who do not understand cycles in farming, make a wrong decision like trying to get rid of the O'Neill Unit because it is not needed now. Will it be needed in 10 years? How about five? No one knows but we can plant for the need now because we know the need will come. When it does, it's better to be ready than sorry.

I support the O'Neill Unit because I know what it can do for our area and for our country. Another argument used is the cost os the project. Do the people who use that argument know how much money has come into state and national treasuries because of irrigation? How about increases in our standard of living?

Please continue to support the O'Neill Unit as best for our nation's long and short term interests. Thank you

STATEMENT OF MARY LOWERY, O'NEILL, NEBR.

Dear Sen. Hatfield,

I am glad that Congress is taking a serious look at ways to reduce the federal debt but I wonder about some of the ways that are being chosen, projects that are being eyed for elimination.

Reclamation projects like the O'Neill Unit are not exempt from examination andthis is a good idea because it will show the Congress what a sound investment these projects are in our nation's future.

You use benefit-cost ratios to look at the economic feasibility of projects such as the O'Neill Unit which today will return more than $1 for every $1 spent in its construction. Over how long a period is that benefit charted? Does it take into account the added economic activity at the local and state levels, the fact that every $1 raised on the farms turns over five or seven times? What about the increased tax revenues at the local and state level? Does it include the value of the groundwater recharge, the stability given to our farming economy which is the base for our great nation?

The answer to those questions is that the O'Neill Unit is a much better bargain than the benefit-cost ratios indicate.

All the studies made in recent years have shown that the project is the best one going for our area and the cheapest in the long run in terms of benefits and costs to all involved. Please continue to support the O'Neill Unit for funding and construction as a very sound investment in our nation's future.

Statement of E. W. Davis, Ainsworth, Nebr.

Dear Chairman Hatfield:

I have read with a great deal of interest, The Nature Conservancy's alternative to the Norden Dam Project, and find it totally without merit.

One hundred and ninety-six (196) wells pumping water from an already depleted ground water supply would only serve to further deplete the supply to zero.

It is like drawing water from the bottom of a barrel and pouring it back in the top without a funnel. Eventually you lose enough water to empty the barrel completely.

The only other feasible source of water is to pump from the river; which would totally dry up the river, from that point to its mouth, creating havoc with fish and wild life in that portion of the river. This also places a tremendous hardship on the people who use the river down stream from that point.

WE MUST MAINTAIN THE NORMAL FLOW OF WATER IN THE RIVER FOR ALL CONCERNED.

The only way this can be done is with the construction of THE NORDEN DAM to capture and use the excess flood and run-off water, and maintain a healthy and normal flow of downstream water.

Statement of Hermann Buss, Chairman, Lower Big Blue Natural Resources District

Dear Senator Hatfield:

This letter is to express our District's support for the O'Neill Unit in north central Nebraska.

We have looked at the various alternatives that the Bureau of Reclamation have studied regarding this project, and even the latest proposal "Niobrara Alternative" which proposes 196 pumping stations, and have come to the conclusion that the Bureau's proposal of constructing the Norden Dam and Reservoir is still the most beneficial for the purposes of which this project is intended.

One can be critical of the cost of the Norden Dam Project but one should also remind themselves as to why the cost has increased. This project has been tied up in the courts for several years on basically environmental issues only and during a time when inflation rates have been at double debit figures. It's very easy to obtain opposition to a project like the O'Neill Unit and get petitions signed by people who are only looking at cost and not long range benefits and are easily sold that maybe that this Dam will destroy the environment of the Niobrara River.

Lets plan for the future of this country and not do everything when there is a crisis. After all, these types of projects are not planned and constructed overnight.

STATEMENT OF CARROL H. MCKAY, NEBRASKA

Dear Chairman Hatfield:

I ask your support for the construction of the Norden Dam and the O'Neill Irrigation Unit. It is of extreme importance that this Project be constructed to conserve and store the water in this area for the purpose of recharging and stabilizing the groundwater levels. As you are well aware, there is a vast amount of center pivot irrigation with the potential for more in the area adjoining the proposed Dam. To insure that the production of food and fiber continue, adequate underground and above the groundwater must be available. The O'Neill Unit can provide that insurance.

It will also reduce considerably the amount of erosion and conserve our valuable soil. In addition to conserving the soil, it would conserve water, a resource that otherwise would flow eventually to the Gulf of Mexico to be of little or no value in the production of food for all mankind. Not only would the reservoir provide soil and water conservation, it would also provide unlimited recreation activities for vacationers and the working public.

Most important is the economic impact the Unit would have in the immediate and outlying areas. The additional revenue generated would greatly aid the local communities and insure their survival as well as adding tax dollars that will eventually pay for the Unit itself and fund other needed government programs.

Again, I ask your support for continued funding and construction of the Norden Dam and O'Neill Irrigation Unit.

Thank you.

STATEMENT OF RUSS MINER, O'NEILL, NEBR.

Dear Sir:

During a recent rain we had here in northeast Nebraska, I noticed the water running off the fields into the road ditches. With it was going silt, soil nutrients, etc. I can't help but think of the advantages there would be if this water could be stored somewhere and later used in a beneficial way. Aproject like the O'Neill Unit would store water to be used for irrigation when it was needed. With the economy as it is, the O'Neill Unit would probably employ people in the area, spend dollars in the area, and help us on down the road. With more irrigation wells going in each year, and more water being taken from the ground, we need to be concerned with having enough water in the future to fill our needs. The water level in my irrigation wells, for instance, is getting lower and lower every year. In ten more years, I could be forced to quit irrigating.

Last year my irrigation by deisel fuel cost me five thousand gallons of fuel or approximately $40 per acre to pump water. My electric system cost approximately $25 per acre. We had above average rainfall this year, so normally, the cost would be considerably higher. If I were getting water from a canal, such as from the O'Neill Unit, it could cost around $8-12 per acre to irrigate, plus there would be a recharge benefit which is not noticeable to the eye. The O'Neill Unit would store precious water which would otherwise be carried away from this area permanently.

I certainly hope you will take into consideration the future of Nebraska and our need for the O'Neill Unit project to be put in motion as soon as possible. We have "just begun" to farm this state. The important ingredient lacking is enough water. If we let the river run wild, there will be no future for Nebraska. At a time like this, when it is so important to conserve energy, it seems that we could be conserving a great deal of energy when the O'Neill Unit is completed.

STATEMENT OF GOV. ROBERT KERREY OF NEBRASKA

Dear Mr. Chairmen and Members of the Subcommittee:

I am writing to encourage your support of funding for the Missouri National Recreation River Project which was authorized by Congress 1978. This project is a 59-mile stretch of the Missouri River between Gavins Point Dam near Yankton, South Dakota and Ponca State Park at Ponca, Nebraska.

The project is authorized for 21 million dollars. For fiscal year 1984, $2,500,000 is needed for construction. For that same year, $200,000 is needed for operation and maintenance. This operation and maintenance money is needed to maintain existing structures valued at $5,743,000.

This project is important because it controls erosion and the loss of precious, highly productive land. The control of this river bank erosion, which was caused by the building of Mainstem Dams, will preserve timber, scenic beauty and other values which are very important for the future generations.

It is important to understand that almost $6,000,000 has been spent to date on bank stabilization structures in this stretch of the river over the last eight years. In addition, $600,000 has been spent for completing the necessary environmental impact statement, cultural and archological research, and advanced engineering to bring this project to the construction stage.

A team comprised of governmental agencies, environmental groups and farmers have worked many years with the Corps of Engineers to analyze this project. Although our main concern is to protect the soil from stream bank erosion and prevent the loss of valuable agricultural and rural lands, we should also consider the value of this project in creating jobs and economic activity for the states of Nebraska, and South Dakota.

I encourage your support of this project and will gladly make my staff available to answer any questions that you may have.

STATEMENT OF MARVIN ZISKA, O'NEILL, NEBR.

Dear Sen. Hatfield,

Would you throw money down the drain, if it was yours or that of the taxpayers? Of course not. But that is what opponents of the O'Neill Unit are trying to do and they may very well succeed this year unless you continue to vote for the O'Neill Unit.

The "money" I am talking about is the cost to replace the water from the Niobrara River which flows, unused, into larger rivers and eventually into the Gulf of Mexico each year. We are now replacing that water with water from our underground reservoirs, but what happens when water levels are too low for us to use that water any longer? Texas can answer that question.

Let's take a long, hard took at Texas. Once the cattle feeding leader in the nation, now second to Nebraska because it can not support that industry any longer, due to large declines in its groundwater and accompanying declines in crop production. Can the nation stand to lose another area like Texas's irrigation belt because surface water projects like the O'Neill Unit are killed by people armed with only half the facts, and distorted ones at that? I think not and I know, based on your past support of the O'Neill Unit, that you agree with me.

Please vote for continued support for the O'Neill Unit. It can be built with a united front in Congress which your committee can help to build.

STATEMENT OF BLANCHE ZISKA, O'NEILL, NEBR.

Dear Sen. Hatfield:

Stay the course. Isn't that what the presient asked our country to do when he first devised a plan to pull us out of the recession? Has holding to the course, with a few minor alterations, proven successful? I believe that we are seeing an end to the recession, so holding to the course with time-proven principles still works.

The same is true for the O'Neill Unit. It is in trouble, no doubt about it. High cost in a time when Congress and the nation are looking for things to cut without hurting the nation now or in the future; new suggestions which, as a second look lose their attractiveness if viewed with an open mind and an eye to the good of the future of our country; the move now to scrap the proejct and start over, even if that means another 10-20 year wait which we can not afford.

You and your committee have stayed the course in the past with your support of the O'Neill Unit, supporting it when this was not a popular thing to do in Congress in the past few years. I appreciate your support and please continue to support the project as the best plan in our area to keep a strong agricultural base for our great nation.

From the viewpoint of groundwater recharge, correcting high nitrate problems, utilizing a water resource that would be lost, and cost benefits, I feel the O'Neill Unit is still the best bet for our country and this area.

Thank you again for your support of the project.

Letter From James Schatz, Chairman, Ainsworth Planning Commission

3-21-83
Ainsworth, NE
69210

J. James Exon
United States Senator
3313 Dirksen Bldg.
Washington, D.C. 20510

Senator Exon,

As Chairman of the Ainsworth Nebraska Planning Commission, I feel compelled to express my sentiments toward your recent correspondence concerning the future of the O'Neill Unit in North Central Nebraska.

In regard to your letter of March 10, 1983 to Mayor Leach, you state that this project 'may be at a crossroads.' Residents of North Central Nebraska can only sigh with relief as it appears that, after many long years of waiting, we may soon know the ultimate future of the O'Neill Project. As you stated in your letter, "the long legal battle over environmental concerns could be resolved, perhaps rather soon."

To introduce any alternatives to the O'Neill Project at this time would only be submitting defeat of the project. This would be totally unacceptable to propponents of the Norden Dam - O'Neill Project.

I would suggest that, as our representative to the United States Senate, you remain uncompromising in your efforts toward the construction of the Norden Dam.

Alternatives should only be considered after the O'Neill Project has been de-authorized in Congress.

Respectfully,
James Schatz
James Schatz
Chairman, Ainsworth
Planning Commission
Ainsworth, NE 69210

STATEMENT OF ROBERT E. MILES, O'NEILL, NEBR.

Dear Sen. Hatfield,

I read in the daily newspapers where the opponents of the O'Neill Unit have come up with another brilliant delaying tactice to try and kill the O'Neill Unit and it makes me just a little bit angry.

Their plan sounds good if you don't know beans about farming and irrigation, so it will probably appeal to a lot of the Congress since most of you are not farmers. The idea of taking water from wells in an area where engineers say the topography is not right for wells and pumping that water to another area where it is needed doesn't make a lot of sense to me. Not when you can take water from the Niobrara River which is just going out of the state and do the same thing, only better and for a lot longer period of time.

Have you ever been to Colorado and looked at how those people use their water? There isn't a whole lot left when it leaves their state but in Colorado they grow a lot of produce that we need. The O'Neill Unit would do the same thing only it would take only a small part of the water out of the river to use for crops and to replenish the groundwater tables which are falling.

I think the O'Neill Unit is the best idea there is for our area and have thought so for a long time. I studied all the alternatives that keep coming up and the studies which are done on them and they all show the O'Neill Unit is the best. If they could come up with a better idea, I would sure want you to vote for it but they haven't yet. So please vote for the O'Neill Unit again this year. Thank you very much

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LETTER FROM WILLIAM GUDGEL, JOHNSTOWN, NEBR.

March 24, 1983

Senator J. James Exon
U. S. Senate
3313 Dirksen Building
Washington, D. C. 20510

Dear Senator Exon:

I wish to make it known that I am in full support of the O'Neill Unit and the construction of the Norden Dam. I also respectfully request you to consider the following points when considering this project.

First of all I feel the "well field" idea is the poorest compromise that could possibly be made. I have not seen any cost for energy or life cycle costs. It is my feeling over a period of years these costs will far exceed the life cycle costs of the Norden Dam.

Secondly, with as many pumping stations that will be required, I fear for the environment below the river. How will the obvious large fluctuations in water level due to the pumping effect the downstream environment. The environmental impact of the Norden Dam is limited and I feel this may not be.

Third, I agree government must curb spending! However this money will be put into our suffering economy rather than in El Salvador. If government spending is a consideration lets address our problems at home with aid rather than abroad.

In conclusion I feel we must stand firm with no compromise. The idea of the well fields would be as much of a flagrant waste of taxpayers dollars as the amount of our inflated dollar, environmental impact statements, and reports that have been submitted since the inception of the O'Neill Unit and the construction of the Norden Dam.

Sincerely,

William L Gudgel

William Gudgel
Landowner

STATEMENT OF DONALD L. WAGNER, STATE SENATOR OF NEBRASKA

Dear Senator Hatfield, Nebraska's agricultural economy has made us keenly aware of the value of our water resources. Demands for water continue to increase while the supply of water decreases. The O'Neill project is a means to make better use of our existing water resources.

Conservation and storage of water are the keys to wise management of water. It is important that water be available when needed at different times of the year. We can no longer rely on nature alone. The O'Neill project will also bring an added bonus to the citizens of the State with its many recreational opportunities.

I thank you for your consideration and ask your support for continued funding for the O'Neill division.

STATEMENT OF HOWARD L. PETERSON, STATE SENATOR OF NEBRASKA

Dear Chairman Hatfield, I want you to know how much I appreciate your stand in support of the O'Neill unit in north-central Nebraska. The same appreciation extends to the whole Nebraska delegation in Washington.

As you know so well, the O'Neill unit is important to irrigators. The expansion of irrigation in Nebraska helps to make solid the infrastructure of agriculture in our State.

Nebraska has a great interest in stabilizing the ground water supplies in the State. The O'Neill project would help accomplish this important goal.

You may be interested to know that every President in the last 20 years has supported the O'Neill unit.

Since the O'Neill unit is authorized and basically planned, it deserves your continued support.

STATEMENT OF NADINE R. STRIVENS, O'NEILL, NEBR.

Mr. Chairman, please acknowledge my support for continued funding and construction of the O'Neill unit.

This unit is needed for the following reasons: (1) Irrigation; (2) recreation; (3) flood control: (4) fish and wildlife; and (5) social and economic development.

This project is extremely important to and for this area. I appreciate your stand in support of this O'Neill unit.

STATEMENT OF JOHN H. ALBRECHT, ATKINSON, NEBR.

Dear Senator Hatfield, I support the Norden Dam project.

STATEMENT OF JUDY A. FRICKEL, ATKINSON, NEBR.

Hon. Mark Hatfield, chairman, I would appreciate it if you would give your support for continued funding and construction of the O'Neill unit.

Thank you.

STATEMENT OF MR. AND MRS. RAYMOND HARMON, PAGE, NEBR.

Senator Hatfield, we support appropriations and construction of the O'Neill unit of the Norden Dam. We feel this will help recharge and stabilize ground water levels. We are farmers in a farming community and feel this project is of utmost importance to irrigated agriculture in Nebraska.

We have children and grandchildren and feel this would help their future—an investment in the future—for them and many others.

STATEMENT OF JOHN AND MARY KEOGH, ATKINSON, NEBR.

Dear Sir, we have been supporting the Norden Dam for years and will continue to support continued funding of the O'Neill unit.

Should one judge stop construction of a dam? This business should be up to the farmers and people who live here to decide. We pay for it in the future. Most of the people who are against the dam don't live here.

Using wells to fill a dam is too expensive and won't last. Even expense of our irrigation wells is getting higher.

Sixty years ago, we talked about daming the Niobrara River to save water. Let's get the job done.

STATEMENT OF PAUL KRUGMAN, NORTH PLATTE, NEBR.

Dear Sir, thank you for giving me this opportunity to speak to you.

I know the cost of O'Neill project has gone up in price. So has a lot of everything else. A car 10 years ago could be bought for around $2,500. At today's prices, that same car would come up in the $10,000 price range.

I have some questions about a smaller dam being built. Having lived fairly close to Niobrara River, south of Lynch over in Holt County, I have seen the flow get very low through July and August. So there would have to be storage enough to handle the demand through those peak times.

Water is getting to be a more valuable item. So I think we have to store it and recharge the underground.

Thank you.

STATEMENT OF GUSTAV THIESZEN, HENDERSON, NEBR.

Hon. Mark Hatfield, whereas the O'Neill unit has one of the best benefit-cost ratios of any project being considered for the construction in the U.S.A., I feel you should support it wholeheartedly.

The third phase of the Pick-Sloan Missouri project was irrigation for the O'Neill and related areas. We're looking to you to see that the complete project is completed as first passed by Congress. The project, as you well know, was flood control for cities down the Missouri River, electric power plants, and last phase, irrigation.

Since there is no value that can be set on water, we need to conserve all that we can. Its so basic, like air and sunshine. There are so many benefits for the whole State and country that we would solicit your full support for funding and construction of the Norden Dam and Reservoir. Water is food, both in peace and war.

STATEMENT OF EMORY BERGH, PLAINVIEW, NEBR.

As a retired farmer who has irrigated since 1950, I have seen the great benefits in irrigation. I felt it was insurance for getting a crop with good yields. It assured us of water when rain didn't come.

It doesn't seem right to not dam up the water and use it for irrigation and recreation, rather than let it run and eventually end up in the ocean.

STATEMENT OF F. H. CARR, SPRINGVIEW, NEBR.

Dear Senator Hatfield, I support the continued funding of the O'Neill project for the following reasons: For the strong economic impact on the country, more jobs, greater revenues, and higher water levels in this part of the State.

Use could be made for the water which is not beneficial to anyone at this time. The reservoir would be beneficial for recreation.

STATEMENT OF JOHN F. MAGREE, GRAND ISLAND, NEBR.

Dear Sir, this is to inform you and your committee of my strong support for construction and development of the O'Neill unit, Nebraska, Pick-Sloan Missouri basin program.

Ground waters of the area continue their serious decline which the project water can enhance and stabilize. Also, this surface water will prevent the degradation of the areas water quality.

The enhanced recreational activities and fish and wildlife well-being, in my opinion, will greatly exceed any environmental degradation that the project might or might not cause.

Please be advised that I will appreciate your efforts to appropriate funds in fiscal year 1984 for the O'Neill unit.

Thank you.

STATEMENT OF DONALD HOLTGREW, ATKINSON, NEBR.

Dear Mr. Hatfield, as chairman of the Committee on Appropriations, surely as you review the O'Neill unit project you would realize what benefits can be obtained for the amount of dollars spent.

Please keep in mind the lifespan of such a project is indefinite. In these tough times, anytime we can do something this overwhelmingly helpful for the economy in the way of jobs, productiveness, and conservation of vital natural resources, let's not waste this opportunity.

STATEMENT OF DENNIS KLIMENT, ATKINSON, NEBR.

I am very concerned about the rapid decline of our water level in north-central Nebraska. The O'Neill unit must be constructed to help solve the problem.

We need your support on the O'Neill unit. We have waited long enough already; so let's get things going.

STATEMENT OF NORRIS C. GEORGE, O'NEILL, NEBR.

Sir, pick up any conservation magazine and you are told of the billions of tons of top soil that is leaving our farms every year.

I drove to Boyd County yesterday and as I crossed the Niobrara southeast of Spencer, I was appalled at the dirt that the Niobrara was carrying—the water was downright brown.

The Norden Dam, besides saving and storing water for irrigation, helping to recharge ground water, would also help to clean up and hold back the soil that the Niobrara is carrying down, some of which is being deposited at the old town site of Niobrara.

If the people of this Nation were really concerned for the future of this State and Nation, they would insist that the Norden Dam be built, plus many other structures further down the Niobrara Valley.

Also, every draw that leads into the valley should have a structure to hold back runoff from the sides.

Statement of Tom Mundorf, Springview, Nebr.

I am writing to express my continued support for the O'Neill unit. My father and I own and operate over 2,000 acres that would be affected by this project. We both feel that this project would benefit every citizen in the great State of Nebraska, let alone the United States. As more and more water becomes polluted every day, our water supply is going to become more and more valuable every day.

I definitely think that this environmental impact statement has held this project up far too long and it is time to get on with construction.

Statement of Mr. and Mrs. Conrad Frickel, Atkinson, Nebr.

Dear Sir, we are writing again in behalf of the O'Neill unit. We would like your support for funding for the Norden Dam. We need it for several reasons. Ground water recharge—as of March 1982, we have 2,155 irrigation wells registered in Holt County. Each well pumped an average of 800 gallons per minute, or 1,152,000 every 24 hours. That, times the number of wells, equals 2,482,560,000 gallons of water being pumped from the ground every day just in Holt County. At this rate of water usage, the smaller streams will be nonexistant in 20 to 25 years. Brush Creek, which runs through our place, has dropped in volume from 4,200 gallons per minute to around 1,200 gallons in 7 years. The water table has dropped 3 feet in the same time.

The dam will help the economy by supplying jobs for the unemployed. And, last but not least, will create recreation and be beneficial to wildlife. The environmentalists have greatly exaggerated the adverse impact of the dam.

Thank you for past support.

Statement of Randy and Diane Rentschler, Atkinson, Nebr.

Dear Mr. Hatfield, we are writing in support of the Norden Dam project. We irrigate our crops on our farm north of Atkinson and are very concerned about the supply of ground water. Each year the levels have declined. We fear that in the near future we will not have the needed water to produce our crops.

We are farmers and we love the land. We want to preserve it and keep it rich and plentiful. The Lord blessed our State, with agriculture being its main industry. We do not feel the project would harm the environment. It would, in fact, help preserve it in many ways. Provide the possibility for more wildlife along the canal and replenish so much of the land's ground water. The water in the Niobrara is our natural resource. Isn't it a waste to let this water run on to the sea when we need it here and do not use it. This project has been proposed in a way that would not slow the flow of the Niobrara. It will always have its water; we will just be making better use of this resource.

And so many will benefits. After all, our State is an agricultural State. We have to do our best to keep it high in productivity.

Please show your strong support for this project.

Thank you.

Statement of D. C. Evans, Springview, Nebr.

Dear Senator Hatfield, I am writing again to convey my support for the O'Neill project in its present form. This project will serve to help recharge our now diminishing underground water supply as well as furnish a stable water supply for irrigation of several thousand acres of farmland.

Water for this project will not endanger the necessary in-stream requirements of the Niobrara River. It will, instead, make use of that excess water that is now leaving our State. Let us all be concerned with making every effort possible to save our greatest natural resource so that future generations may also enjoy the benefits derived from the availability of water.

The economic benefits derived from this O'Neill unit would benefit this area, the State of Nebraska, and the country as a whole. Your support will be appreciated.

Statement of James and Marie Larson, Springview, Nebr.

Dear Senator Hatfield, we strongly urge you to continue supporting the O'Neill unit project. Other projects in the State have been a success and we feel the O'Neill project would be a great success to our area. The cost ratio is one of the best in the Nation. It would have a good economic impact by creating jobs and financial and industrial growth. We feel the O'Neill project would be an investment in the future. In this area there has been a trend of unemployment and the young people have had to move out in order to exist. As parents, we need to think of the future.

Thank you for your support of the O'Neill project.

Statement of Frank Lambert, O'Neill, Nebr.

Dear Chairman Hatfield, I am writing to you to express my support for the construction of the Norden Dam and O'Neill irrigation unit in north-central Nebraska. Declining ground water tables and excessive irrigation from this ground water threaten both the quantity and quality of water in the O'Neill area.

Today, excess water in the Niobrara River is a wasted resource. Construction of the Norden Dam would utilize this wasted water to recharge ground water levels and improve water quality and provide a significant recreational addition to the area.

Statement of Clayton Goeke, Atkinson, Nebr.

Dear Sir, I am a farmer/rancher living in the area of the O'Neill irrigation unit. Since water is Nebraska's most precious resource, we feel it should be conserved and used in a very beneficial way and the building of the Norden Dam would satisfy this need.

At the present time, the irrigation project in our area would help the unemployment situation. We need the extra water to stabilize and recharge our ground water levels.

Please support the funding and construction of the dam.

Thank you for your past support.

Statement of Jim Passyka, Ainsworth, Nebr.

Dear Sir, please support the O'Neill project. We need more water for irrigation. The farmers and ranchers need water to help support them to raise crops for cattle and to sell to keep them in business.

We need this dam to recharge ground water, for wildlife, recreation, and to make much needed jobs.

But I'm not in support of the alternative of having a lot of little dams. They will not help in the control of floods, like one big one. I think the little ones will cost more and we will not be able to make electricity off of them like we could with one big dam.

Thank you.

Statement of Fred Krugman, O'Neill, Nebr.

Dear Sir, I am writing in support of the O'Neill unit Norden Dam project.

I am a landowner in the project area and feel very strongly about the benefits to the area that the project would give.

Ground water recharge would encompass much more land than the project itself. I feel the project would stabilize the river for year-round flow. Without the project, the flow at the lower end of the river could diminish as the ground water is depleted in this area.

The construction of the project could really help the economy of Nebraska and the cost ratio is one of the best yet.

Thank you for your past support and would appreciate your present support.

STATEMENT OF MARTIN D. HART, LONGPINE, NEBR.

Dear Chairman Hatfield, I have been in favor of the O'Neill unit from the start. We need continued support for the funding and construction needs to be underway. The project has a construction time of 10 to 15 years and we may not have all of the surplus they are talking about now.

The project has been tied up in courts long enough. I am not in favor of the alternatives that are proposed for the project. Cost is one thing, with no return in sight on the dollars invested.

We are at a time when unemployment is at its highest, and the O'Neill unit would put a lot of people back to work.

Your support will be very much appreciated.

STATEMENT OF MR. AND MRS. ROY ELSBURY, ATKINSON, NEBR.

Dear Senator Hatfield, please support the continued funding and construction of the O'Neill unit. The benefit-cost ratio of this project is one of the best in the Nation.

The adverse environmental impacts are greatly exaggerated by preservationists and commercial recreation interests—recreational use of the reservoir will be many times the use of the 19-mile stretch of river to be inundated.

We need this recharge to prevent serious ground water quality degradation.

STATEMENT OF RALPH SHIPPOREIT, AINSWORTH, NEBR.

Dear Senator Hatfield, I have been in support of the O'Neill project since it began and feel that this project has been held up in the courts long enough and it is now time to get on the stick and get it started.

One main argument is, why put it in as we already have a surplus in most everything. Now it will probably take 10 or 15 years to complete this project, so by this time who can say will there be a surplus by this time with our increase in the population and our market increase overseas.

The project would also help keep our underground water stabilized and create more jobs for more people for several years. It would be great for recreation and also a chance of turning out electricity. It would also help flood control. Look at what happened in Louisiana. Maybe if more dams, such as the O'Neill Norden Dam, had been built, maybe this would help relieve the situation.

I sincerely hope we can count on your support for this worthwhile project.

STATEMENT OF PAUL ZAKREWSKI, O'NEILL, NEBR.

Dear Sir, I ask your support for continued funding and construction of the O'Neill unit. I feel the project is extremely important. We need to recharge and stabilize ground water levels and to prevent serious ground water quality degradation.

Irrigated agriculture in Nebraska will promote jobs, financial and industrial growth, and keep more of the younger generation on the farm.

Why not put the excess river water to good use and not a wasted resource. There will be great recreational use of the reservoir which would benefit many from all over.

I strongly urge you to continue supporting this unit.

Thank you kindly.

STATEMENT OF RALPH D. JOHNSON, AINSWORTH, NEBR.

Dear Sir, I am very much in favor of the O'Neill Norden Dam project. It should have been built several years ago. But since it wasn't, it should be started as soon as possible. I am not in favor of the alternate plan as I feel it would cost much more and do less good than that which has already been planned out on paper.

I believe the growing population, the increase in unemployment, and the increase in revenue would be greatly improved just by taking advantage of one of our greatest natural resources.

STATEMENT OF EDNA CARR, SPRINGVIEW, NEBR.

Dear Senator Hatfield, I am writing in support of the continued funding for the O'Neill project for many reasons.

My husband has lived in Keya Paha County for more than 80 years and has never seen the Niobrara River go dry. He has often wondered why all the water was going down the river when so little of it would do so much good for irrigation in the community. He farmed for over 50 years and has seen so many crops ruined by dry weather.

The project would harm no one and would help the whole State economically and would provide recreation opportunities to a vast area.

STATEMENT OF JAMES A. HEIMES, O'NEILL, NEBR.

Mr. Chairman, I support the O'Neill unit and I hope you will also.

Similar water storage dams have been constructed in our neighboring States for soil erosion control, flood control, and very widely publicized recreational benefits that were borderline to primary purpose of construction.

Conservation applies to our water as well as soil. The Niobrara water presently being wasted can be an asset to this area and the State of Nebraska. This water project makes much more sense than some of the so-called water export projects.

I urge your support for continued funding and construction of the O'Neill unit.

STATEMENT OF ALLEN R. CHRISTENSON, O'NEILL, NEBR.

Dear Mr. Chairman, I am writing to ask your support for the O'Neill unit for fiscal year 1984.

This project has been authorized for many years, however it has been held up by a court injunction while the adequacy of the environmental impact statement has been reviewed. We anticipate that legal action involving the environmental impact statement will be resolved this coming year and construction could start.

The year 1982 was disastrous economically for farmers in the farm community. However, 58 percent of the people voting in the fall election voted in favor of taxing themselves to provide funds for water storage projects such as the O'Neill unit. Nebraskans know their need for water and the need for storage and conservation of water.

Numerous alternatives have been reviewed to provide the water that the people of Nebraska recognize we need. All of the alternatives fall short of providing sufficient water storage and delivery at a reasonable cost to the farmer.

I again ask you to support funding for the O'Neill unit and thank you for the support that you have given us in the past.

STATEMENT OF MIKE FLYNN, AINSWORTH, NEBR.

I'm very much in favor of the O'Neill project. I think we should try to control and preserve our ground water level besides our underground water. Nebraska's one of our few States left in our country with such clean water and so plentiful. I think it would help so many farmers and ranchers in need of irrigation. So many farmers and ranchers depend on high yields to service or keep from going broke. Not just the farmers and ranchers, our businesses and our community, which is an agricultural community, that depends on these people. So I feel we would all benefit from the O'Neill project.

I'm not in favor of the alternatives. I think it would be money ahead to stay with the original plans.

Your support would be appreciated.

STATEMENT OF MR. AND MRS. ERNEST RUTHER, SPRINGVIEW, NEBR.

Dear sir, we urge you to support the continued funding of the O'Neill project. Why keep delaying just because a few radicals and some environmentalists are complaining.

We need to keep our water level up and this area needs jobs for the unemployed. Our counties need the business that this dam would bring to the vicinity. We feel that we deserve a recreational area and a boost to our community.

We have waited all these years just because a certain few have been trying to cheat us out of it. Now let's go on with the dam. We have waited too long now.

Thank you.

STATEMENT OF BONNIE DANIELS, LONG PINE, NEBR.

Dear Senator Hatfield, I am writing in support for the continued funding and construction of the O'Neill unit.

The construction of the O'Neill unit would be very beneficial to the people of Nebraska; it would mean jobs for many people, making the unemployment percentage in the United States decrease. It would mean an economic growth, financially and industrially, for many towns and cities. The construction of this project would be an environmental enhancement for the State of Nebraska, as well as a recreational area for many, many sports-minded, as well as for the young, old, or just whomever decides to take off for a Sunday and relax.

We need to get going on the construction of the O'Neill unit. The more time wasted, the more money spent needlessly. Why not have something that the people of Nebraska can be proud of, as well as the people of this country. At least we will have something to show for the money spent. If we are to continue to live and grow, we will need irrigation for agriculture to survive, which the O'Neill unit can provide.

I say, let's get on the ball and get going on the construction. Enough time and money has been wasted needlessly on something that is so badly needed and wanted.

STATEMENT OF ROBERT J. YOUNG, O'NEILL, NEBR.

Dear Sir, I urge your support for continued funding and construction of the O'Neill unit.

We need this O'Neill unit to be able to hold our declining water level from going lower and lower. As everything depends on the soil and water, we better do all we can to preserve it.

Please give this O'Neill unit a big push forward.

Thank you for your help.

STATEMENT OF GARY R. WITT, AINSWORTH, NEBR.

Dear Senator Hatfield, I would like to express my support for the O'Neill unit. There are many reasons why this project is of great importance to Nebraska. The ground water recharge is one very important consideration in these times of declining water tables. The advantages to agriculture are obvious. The project could pay for itself while generating more revenue for Nebraska.

I feel the O'Neill unit is vital to Nebraska and urge your support.

STATEMENT OF KEITH M. THOMAS, O'NEILL, NEBR.

Dear Sir, I am writing to let you know my feeling on the O'Neill unit.

I have lived in the Valentine and O'Neill area all of my life and have been associated with agriculture for 37 years. My opinion is that the Norden Dam project is one of the best things to happen to Nebraska in a long time.

Water is one of our main resources in this State and we let it all run off to some other States. The jobs it would create would sure be a boost to this area. The recreation would bring a lot of money into our State. Most of the people that are against this project are people that do not live in this area. They are more concerned about riding a canoe down the river than the good things it would do for Nebraska.

Sure appreciate your support.

STATEMENT OF MR. AND MRS. ELDON MORROW, AINSWORTH, NEBR.

Dear sir, it is with interest and concern that we recommend your support for the appropriations and eventual construction of the O'Neill unit.

Please do not let small, biased minority groups influence your thinking at a time when jobs and water availability are of utmost importance.

As residents and long-time taxpayers of this area, we urge you to see this project completed.

STATEMENT OF ALMA NELSON, TULSA, OKLA.

Dear Senator Hatfield, this project was authorized by U.S. Congress in 1972 as part of the Pick-Sloan Missouri basin program and will create a reservoir of water which is badly needed.

While primarily the unit is to conserve and provide irrigation water for thousands of acres of farmland in north-central Nebraska, its benefits are many and far-reaching; namely, preserving agriculture, creating new jobs, helping rural communities, preserving family farms, improving business in Nebraska, increasing fish and wildlife habitat lands, and finally, will provide the most beautiful outdoor recreation area in Nebraska.

As I am personally familiar with this entire area and the need for the completion of the Norden Dam and Reservoir, I can, in all sincerity, recommend your support for this worthy project.

This letter is written in support thereof, and I trust you can follow through on to final completion of this project which is now long overdue.

STATEMENT OF WYNN AND JUDY ROBERTS, O'NEILL, NEBR.

Sir, we are asking for your support of the O'Neill unit irrigation project, because we feel it is an investment for the future.

The O'Neill unit will create jobs, help the economy of the State, create a recreation area, and recharge the ground water level at the same time.

Again, we are asking you to support the O'Neill unit irrigation project.

STATEMENT OF JAMES CRUMLY, PAGE, NEBR.

Dear Sir, I am an irrigator and farmer in north-central Nebraska. We are experiencing a declining water table in our area because of the amount of irrigation development. Conservation methods are helping, but without a way to recharge our water system, thousands of acres will be back in a dryland production-type economy by the year 2000. The project will provide a stable water supply to our area besides its recreational possibilities.

We ask for your support of this project.

STATEMENT OF JERRY L. RIES, O'NEILL, NEBR.

Mr. Chairman, I support the O'Neill unit and I hope you will also.

Similar water storage dams have been constructed in our neighboring States for soil erosion control, flood control, and very widely publicized recreational benefits that were borderline to primary purpose of construction.

Conservation applies to our water as well as soil. The Niobrara water presently being wasted can be an asset to this area and the State of Nebraska. This water project makes much more sense than some of the so-called water export projects.

I urge your support for continued funding and construction of the O'Neill unit.

STATEMENT OF VERNON ALBRECHT, ATKINSON, NEBR.

Dear Senator Hatfield, we are writing in regard to the O'Neill irrigation unit. The O'Neill unit has one of the best benefit-cost ratios of any project being considered for construction in the United States at this time. We are also having a drop in our water table, plus nitrate problems at this time and feel this project would help both.

We feel this project deserves your support.

Thank you.

STATEMENT OF HARVEY KRUGMAN, O'NEILL, NEBR.

Dear Senator Hatfield, I am writing to you in regard to O'Neill irrigation unit in Nebraska.

I feel this project is worthy of your consideration and I ask you to support this project.

This project covers a large area for irrigation where water is being pumped from ground. This project could recharge our ground water level which has been declining very much.

The cost-benefit ratio is the best in our Nation. Also, harness water leaving our State, with recreation also a very favored.

So, again, I ask you to favor this project.

STATEMENT OF DALE AND ROSE ROBERTS, O'NEILL, NEBR.

Dear Sir, we are asking for your support of the O'Neill unit irrigation project. We feel this will be a big benefit to this country, by: (1) Saving the good water of this country from going to the ocean; (2) help with the ground water level; (3) give jobs to people are out of work; (4) help the economy of this part of the country; (5) will help the wildlife by preserving the water and land; (6) there will be recreation for all; and (7) help the young farmers with their dryland so they can irrigate.

Please support this project.

Thank you.

STATEMENT OF LYLE E. WILLIAMS, BROKEN BOW, NEBR.

Dear Sir, I am very much in favor of the O'Neill project. This unit has one of the best benefit-cost ratios of any project being considered for construction. To me, it just makes sense to dam up a river and irrigate some 77,000 acres of land rather than let the water flow into the ocean—wasted. These acres are now partially irrigated by wells which are drying up the Ogallala aquifer.

The dam would surely improve the economy in the area and also in the State of Nebraska. This has been proven in Brown County since Merritt Dam was built. (I am a limited partner in Williams and Williams in Ainsworth, Nebr.)

Some persons contend that construction would spoil the beauty of the river and surrounding area, whereas we feel it would be made more attractive. Another favorable feature would be the availability of a great recreation area for families of our State.

We urge your support for continued funding and construction of the O'Neill unit.

STATEMENT OF JANICE PENNINGTON, AINSWORTH, NEBR.

Dear Senator Hatfield, I strongly support the O'Neill unit. It has one of the best benefit-cost ratios of any project being considered for construction in the United States and is authorized and basically planned. The State of Nebraska has a unique supply of water. This project will help to govern this rich blessing we have.

Please support continued funding and construction of the O'Neill unit.

STATEMENT OF NELLIE DAVISON, AINSWORTH, NEBR.

Dear Senator Hatfield, The O'Neill water project should be constructed and completed beyond a doubt. Nebraska has a unique supply of water and this project can be used to help monitor the use of this rich blessing.

The United States is an agricultural nation and our economy is based on agriculture. We must not allow a few people to stop or prevent progress of this vital economic support.

The O'Neill irrigation project will have many benefits other than irrigation and untold benefits will be available for many people.

Thank you for your attention.

STATEMENT OF CLARENCE A. LEWIS, JR., GRAND ISLAND, NEBR.

Dear sirs, this letter is to express my support for continued funding and early construction of the O'Neill unit.

Because Nebraska has no major natural resources other than its plentiful water and fertile land, proper conservation and use of these is critical to the economic well-being of the whole State. The success of irrigation as a potent economic factor has been shown by economic studies done at the University of Nebraska as well as at other prominent universities in other States. The success of irrigation as an agricultural enterprise has been amply demonstrated by existing private and public irrigation developments in Nebraska for many years.

The O'Neill unit is needed for human environmental as well as economic reasons. Recharge of the ground water aquifer in the O'Neill unit area is needed to maintain ground water levels and the quality of the ground water. The latter is of importance to everyone in the area because of the use of the ground water for domestic, livestock, and irrigation purposes. The quality of the ground water is now declining. Studies by the Bureau of Reclamation show that without such recharge, and with continued use of the ground water by irrigators, the water quality will continue to decline to the point that the water will be unusable for any purpose.

This project has been delayed much too long already. Many millions of dollars in benefits have already been foregone because of this delay.

I respectfully solicit your support for continued funding and early construction of this important project.

Statement of Paul Poessnecker, Atkinson, Nebr.

Dear Senator Hatfield, we have been supporters of the Norden Dam for a long time and feel it is a disgrace that the opponents are wasting precious time and water in trying to defeat a needed project such as the Norden Dam. The alternatives have been studied by the Bureau of Reclamation. It was found that the cost-benefit ratio will not compare with the Norden Dam.

Test wells south of Butte, Nebr., along the Niobrara River have been drilled by Grosch Irrigation. All test holes have been found unsatisfactory.

Sure we have a surplus of farm commodities today, but with the demand of a growing world, how long will that surplus last?

Your support of the O'Neill unit will save one of Nebraska's natural resources—water—which is so vital to a State that ranks No. 2 in irrigation.

Don't let Nebraska's water flow to the Gulf of Mexico.

Statement of Keith Davis, General Manager, Loup Basin Reclamation District

Dear Mr. Chairman, I am writing in support of the O'Neill unit of the Pick-Sloan Missouri basin program.

The Pick-Sloan plan for the Missouri basin has eliminated the devastating floods of the past. It has resulted in the generation of huge amounts of hydroelectric power, water for reclamation, for municipal and industrial purposes, as well as for many other purposes. The program was authorized as a package and full benefits cannot be realized until all units are completed.

I believe the O'Neill unit to be a good, sound project and it is very badly needed in northeast Nebraska.

With all the present and future demands for water, we must utilize this natural resource to the fullest in order to help reduce future water shortage crises.

I urge your committee to appropriate the requested funds for the O'Neill unit in fiscal year 1984.

Statement of Paul C. Madron, District Manager, Upper Loup Natural Resources District

Dear Mr. Hatfield, The Upper Loup Natural Resources District has repeatedly gone on record as being a supporter of the O'Neill unit. We urge you to consider support for the continued funding and construction of the O'Neill unit.

Your attention to this matter is greatly appreciated.

Statement of Russ Barelmann, President, Holt County (Nebr.) Farm Bureau

Dear Sir, the largest farm organization in Holt County, Nebr., strongly supports the Norden Dam project. The Holt County Farm Bureau has actively supported this project for many years. Both the long-term and short-term benefits will have a dramatic impact on the economy of the county and State.

The most important benefit is a recharge of the underground aquifer. This cannot be accomplished by any of the proposed alternative plans. We will be using surface water that is now running into the Gulf of Mexico and benefiting few people.

This project has been thoroughly studied and researched. Now is the time to build. The area needs the jobs and the water. The project is cost effective.

The alternative proposals are just shams being used by the uninformed but noisy opposition to kill the project. Most of the opposition comes from the cities that are not directly affected by the project.

You will do this Nation a service if you promote the Norden Dam project.

STATEMENT OF JACK HENDERSON, ON BEHALF OF THE O'NEILL AREA CHAMBER OF COMMERCE

Dear Mr. Hatfield, again we wish to request continued support by the Senate for the O'Neill unit.

This project is of immense importance, not only for the immediate area and State, but to the Nation for a variety of reasons. Food and water are the two most important necessities in life and the production and preservation of these items must top our list of priorities for future planning.

The recently announced alternative (wells) to the O'Neill unit is not an alternative at all, but rather an ill-conceived method designed to kill the project. Enormous amounts of energy would be required to operated those wells, which would only further deplete dwindling ground water resources in the area.

The Norden Dam is a sound, sensible, and economical project which is desperately needed. Forget the paid-for petitions and always vocal minority against the project; instead, ask the Nebraska voters.

STATEMENT OF WILLIAM G. UMBERGER, GENERAL MANAGER, TRI-BASIN NATURAL RESOURCES DISTRICT

Dear Sir, on behalf of the board of directors of the Tri-Basin Natural Resources District, I strongly urge that you support continued funding and construction of the O'Neill unit as you have so capably done in the past.

This natural resources district contains the largest surface water irrigation district in the State of Nebraska (Central Nebraska Public Power and Irrigation District) making us well aware of the advantages of this type of project, not only in service to surface water users but also for ground water recharge, recreation, and enhancement of fish and wildlife. Other areas of the State that rely strictly on ground water for irrigation are in many instances experiencing a decline in the water table, while this area has a stable or rising water table.

This first-hand experience of the benefits of a surface water irrigation project has been the reason that this NRD has supported the O'Neill unit in the past and urge you to continue your efforts for continued funding and construction.

STATEMENT OF PAUL E. PRITTS, MANAGER, BOSTWICK IRRIGATION DISTRICT IN NEBRASKA

Dear Sir, on behalf of the board of directors of the Bostwick Irrigation District in Nebraska I would like to voice the district's support in favor of the funding and the construction of the O'Neill-Norden Dam reclamation project in north-central Nebraska.

We are hopeful you will weigh all the alternatives to this project and give it your fullest support. This project will be very beneficial to the future of agriculture in the State of Nebraska.

Thank you for your attention in this matter.

STATEMENT OF F. D. GRAFF, GENERAL MANAGER, MIDDLE NIOBRARA NATURAL RESOURCE DISTRICT

Dear Senator Hatfield, the USDA Soil Conservation Service reports indicate urbanization, industrial and highway construction are eating up 1 million-plus acres annually of our Nation's prime agriculture land. The High Plains Ogallala aquifer study documents declining ground water supplies throughout much of the mid-plains. Thereby, if these two situations prevail, we could very well be experiencing the last area of agricultural surplus in our Nation's history.

Water is essential for food production, which our future generations will require to sustain life. Therefore, we sincerely request you would continue to support the O'Neill project and that construction will proceed as planned and authorized.

We are most appreciative of your past support and firmly believe it imperative that the O'Neill project move ahead quickly as possible.

STATEMENT OF KEITH DRURY, DISTRICT MANAGER, LOWER NIOBRARA NATURAL RESOURCES DISTRICT

Dear Mr. Hatfield, the board of directors of the Lower Niobrara Natural Resources District on March 17, 1983, voted 12 to 3 to support the O'Neill project. The directors feel that the Norden project is a viable project, that it is a project which proposes to use the waters of the Niobrara River within the immediate area, that it can stabilize the declining water table in the northern Holt County area, and that it will provide economic benefits to the immediate area as well as the entire State of Nebraska. We, therefore, encourage your support for continued funding on construction.

STATEMENT OF LEE ORTON, EXECUTIVE DIRECTOR, NEBRASKA ASSOCIATION OF RESOURCES DISTRICTS

Dear Senator Hatfield, since the Nebraska Association of Resources Districts first began taking positions on policy and project activities in Nebraska resources programs, it has supported the O'Neill unit, Pick-Sloan Missouri basin program.

That project would do much to help Nebraska properly utilize the water available to it in maintaining a sound agricultural base for the State and this Nation in the future.

Once again this year, the association expresses its support for the project and supports fiscal year 1984 appropriation requests for the project as outlined in the Bureau of Reclamation's budget proposal. Funding for preconstruction work, structural design, and access road improvements are necessary steps to get the project moving again after the long and unnecessary delays which have hampered its fulfillment.

Please continue to support Nebraska and the local project sponsors in completing this project.

STATEMENT OF ROBERT L. RAUN, DIRECTOR, NEBRASKA DEPARTMENT OF AGRICULTURE

Dear Senator Hatfield, as director of the Nebraska Department of Agriculture, I wish to go on record in support of the Bureau of Reclamation request for $1.57 million for the O'Neill reclamation project for fiscal year 1984.

This project would provide surface irrigation to 77,000 acres of farmland in north-central Nebraska and would also provide ground water recharge to an area which is facing a return to dryland agriculture if the project is not completed. Agriculture is the foundation of the economy of Nebraska and is the most efficient production system in the world. The continued development of water resources to provide for the food and fiber needs of the future is imperative. If the project is allowed to move ahead, it will still be several years before completion. This project was authorized more than 10 years ago.

The project has been well planned, will fill an important need, and deserves your strong support.

STATEMENT OF EDWARD M. GLEESON, MAYOR, O'NEILL, NEBR.

Dear Mr. Chairman, the city council of O'Neill has repeatedly passed resolutions in support of the O'Neill unit over the years. I am writing to inform you that our support does not waver.

Alternatives for this project have been reviewed and found unworthy. Currently there is a new alternative to the project being discussed that is merely a combination of previously studied alternatives which all are infeasible. The latest alternative fails to provide storage of water and has the effect of seriously dewatering an area along the Niobrara River.

I urge your continued support for funding for fiscal year 1984 and thank you for your past support.

STATEMENT OF ROBERT MALONE, MAYOR, AINSWORTH, NEBR.

Dear Mr. Chairman, since the agricultural industry in the United States literally feeds the world, we must make every effort to make that industry more economically feasible. With the escalated cost of production and the low price for the products, we must make every effort to insure the industry one of their essential natural resources.

In conclusion, I would like to express our full support for the O'Neill unit and the construction of the Norden Dam. Your support would be greatly appreciated.

STATEMENT OF WILFORD LEACH, COMMISSIONER, BROWN COUNTY, NEBR.

Dear Senator Hatfield, I wish to make it known that I am in full support of the O'Neill unit and the construction of the Norden Dam. I also respectfully request you to consider the following points when considering this project.

First of all, I feel the well field idea is the poorest compromise that could possibly be made. I have not seen any cost for energy or life cycle costs. It is my feeling, over a period of years these costs will far exceed the life cycle costs of the Norden Dam.

Second, with as many pumping stations that will be required, I fear for the environment below the river. How will the obvious large fluctuations in water level due to the pumping effect the downstream environment. The environmental impact of the Norden Dam is limited and I feel this may not be.

Third, I agree the Government must curb spending. However, this money will be put into our suffering economy rather than in El Salvador. If Government spending is a consideration, let us address our problems at home with aid, rather than abroad.

In conclusion, I feel we must stand firm with no compromise. The idea of the well fields would be as much of a flagrant waste of taxpayers' dollars as the amount of our inflated dollar, environmental impact statements, and reports that have been submitted since the inception of the O'Neill unit and the construction of the Norden Dam.

STATEMENT OF J. MICHAEL JESS, DIRECTOR, NEBRASKA DEPARTMENT OF WATER RESOURCES

Dear Senator Hatfield, past actions of this department have, in effect, granted State approval for construction of the O'Neill unit as authorized by Congress in 1972. Maintaining and enhancing Nebraska's agricultural output is in the public interest. From a statutory point of view, sufficient unappropriated water is available for the project.

During October 1980, this department was provided a report on the safety of the Norden Dam prepared by an independent board of consultants. Following review of that report, I feel certain the Bureau of Reclamation will take all prudent measures in final design and construction of the dam.

I am pleased to report on the status of the project from the viewpoint of this department. Continued funding for the O'Neill unit is urged.

STATEMENT OF FRED KRUGMAN, CHAIRMAN, HOLT COUNTY (NEBR.) BOARD OF SUPERVISORS

Dear Sir, as chairman of the Holt County Board of Supervisors, I wish to express our continued support of the O'Neill unit. The irrigation, recreation, flood control, fish, wildlife, social, and economic benefits of this project continue to make the benefits far outweigh the cost.

With this in mind, the Holt County Board of Supervisors respectfully requests your support of the appropriation necessary to make this project a reality.

Thank you.

STATEMENT OF LLOYD W. WALDO, O'NEILL, NEBR.

Dear Mr. Hatfield, I wish to lend my support for the funding and construction of the O'Neill unit. We need this project to recharge our underground water supply. The good that this project would do would repay the Federal Government many times over in years to come in the jobs that it would provide and agricultural growth for the whole State of Nebraska.

STATEMENT OF DAVID L. DRAEGER, ATKINSON, NEBR.

In a time when the position of agriculture in north-central Nebraska is so delicate, and yet becoming increasingly more important to our State and National economy from the shrinkage of farms and farm acres, we feel that water management and control must be a very important concern both now and in the future.

Steps must be taken before we are literally pumped dry. Each delay brings us closer to a more costly conclusion. Please consider this matter with much foresight.

Thank you.

STATEMENT OF DANIEL R. EWERS, O'NEILL, NEBR.

Dear Senator Hatfield, I am very familiar with a project of this type. The Sherman Dam project in Sherman and Howard Counties, Nebr., is much the same as the Norden Dam project. The Sherman Dam project has given the economy in the area a great boost, larger corn yields, rich ground due to irrigation, recreation for the public, as well as employment of people. Norden Dam would give us the same benefits as Sherman Dam. The farmers, merchants, bankers, and all other people that Sherman Dam has affected never say an unreputable word about it.

Again I state, Norden Dam would be a big plus to everyone concerned.

STATEMENT OF GEORGE A. JANOUSEK, O'NEILL, NEBR.

Dear Senator Hatfield, it is my firm belief that the O'Neill project will only serve the needs of the project area in the original design submitted by the Bureau of Reclamation. Any alternatives to this Bureau's design will not be economically feasible or beneficial.

I am asking you to please give this project, as designed by the Bureau of Reclamation, your continued support.

STATEMENT OF JOHN C. WATSON, O'NEILL, NEBR.

Dear Mr. Chairman, we have not wavered from our wholehearted support of the O'Neill unit and urge your subcommittee to support the project.

Water continues to be one of the primary assets and necessities in our area and in Nebraska, and we feel strongly that it is here for us to use and conserve. The O'Neill unit will use excess river water for irrigation and recreation, as well as recharge and stabilize ground water levels.

We will appreciate any assistance you and your subcommittee can provide for the continued funding of the O'Neill unit. This project is vital to the economy of this area, this State, and to this Nation.

STATEMENT OF WILLIAM S. MATTERN, O'NEILL, NEBR.

Dear Senator Hatfield, I am writing in support of the O'Neill irrigation unit which will come before your Appropriations Committee.

People whose job it is to project the Nation's resource needs into the future are justifiably concerned about the maintenance of adequate water supplies. Their studies point out, for instance, that the ground water levels in the High Plains Ogallala aquifer will continue to seriously decline. While this is a concern to the States directly affected, the entire Nation will be the loser as such an occurrence could constitute a catastrophe, thereby touching all corners and peoples in the United States.

The probability of such a threat justifies construction of the O'Neill unit. True, the project promises economic and social prosperity to a wide area of deficient rainfall. But it does much more—just as the many water projects already in place, the O'Neill unit, too, will make its valuable contributions to the general welfare, assuring future generations an adequate supply of fresh water for food, health, and recreational purposes.

I respectfully request your continued support for the continued funding and construction of the O'Neill irrigation unit.

STATEMENT OF ROBERT B. CROSBY, LINCOLN, NEBR.

Dear Senator Hatfield, as strongly as words can say it, I urge continued funding and construction of the O'Neill unit.

As a former Governor of Nebraska and one-time speaker of its legislature, I know the great benefits to the Nation from making irrigation available in semiarid areas with high-quality soil. The O'Neill unit will accomplish this objective and, in addition, will provide the environmental and social benefits of a large lake.

STATEMENT OF JULIUS D. CRONIN, O'NEILL, NEBR.

Dear Sir, this is to endorse the so-called Norden Dam project and to ask your help for its construction. We are in an area of short rainfall and our economy, an agricultural area, needs help.

The Norden Dam has a cost-benefit ratio better than any project now being considered and is authorized and basically planned and is needed if our economy is to prosper. It will also provide jobs, a necessity in this area.

I hope you will find time to check into this project and that you will support it at the hearing before your committee.

STATEMENT OF MAURICE A. KREMER, AURORA, NEBR.

Dear Senator Hatfield, I continue my strong opinion of the funding and completion of the O'Neill unit which is part of the Pick-Sloan program. The storage of water in Nebraska is of utmost importance to the economy of the State and our ability to provide food and fiber for our Nation.

It's rather unfortunate that Nebraska has limited natural resources. However, we in Nebraska are quite fortunate that we do have a rather generous supply of surface and ground water. Ground water, especially, is being depleted in several large areas. The O'Neill area is one of them. Unless the ground water in these areas can be recharged through the building of reservoirs, we face some rather serious problems in the foreseeable future.

I have spent 20 years in the Nebraska Legislature with most of my interest and energy directed toward the development of our water resources. I feel more strongly than ever that the future of our State rests primarily with the impoundment of available water.

May I urge your support for this most important project. Your support will be greatly appreciated by most people in the State of Nebraska.

STATEMENT OF WALTER B. JOHNSON, PAGE, NEBR.

Dear sir, we may not see the water run out in our lifetime, but our children will. This is why I ask your support for the Norden Dam—to conserve water and help keep our wells and streams from drying up.

We need to do this now while the water is still available.

Statement of H. Duane McCormick, Springview, Nebr.

Dear Senator Hatfield, the purpose of this letter is to ask for your continued support of the O'Neill irrigation project and the construction of the Norden Dam. The construction of the project is vital to the economic well-being of north-central Nebraska, the State of Nebraska, and the Nation, if we are to continue to be leaders in food production.

We must launch an all-out effort to get construction underway on this project which will help to ease the unemployment problem and to bring the project into production to meet the demands for food in the future.

Thank you for your support of this project in the past, and I hope we can count on your leadership to push the project along.

Statement of Jeff S. Garrett, O'Neill, Nebr.

Mr. Chairman, I am in favor of the O'Neill unit for several important reasons. The growth of agriculture in Nebraska will be enhanced with the completion of the project. It is needed to further develop irrigation in the State, as well as stabilize ground water levels in areas already developed. Also, the ground water quality in the projected area has deteriorated in the past several years. The O'Neill unit will help solve these serious problems and provide a better way of life for Nebraskans in years to come.

Statement of Mr. and Mrs. Jim Ripley, Springview, Nebr.

Dear Senator Hatfield, as residents of Keya Paha County, Nebr., my wife and I are very much in favor of the O'Neill unit-Norden Dam and Reservoir. We feel there is no reason to let excess water flow freely down the Niobrara River when it could be used in many ways right here in Keya Paha and Holt Counties.

The Norden Dam and Reservoir would help to recharge ground water levels and, at the same time, provide a 19-mile stretch of water for fish, wildlife, and recreation for the people. We feel it would greatly benefit the economy for our area and all of Nebraska.

Thank you for your support of the O'Neill unit-Norden Dam and Reservoir.

Statement of Werner Poessnecker, Atkinson, Nebr.

Dear Chairman Hatfield, your support of the Norden Dam is needed. It is the only project that will work. Please do not let our valuable water run into the Gulf of Mexico.

The other project—drilling wells—is absolutely not feasible and is definitely a waste of money. Tests have proven that wells will not work.

Please let us not be moved by signatures obtained by paid workers. Please let us not be moved by vicious propaganda.

Statement of Mr. and Mrs. Boyd Boelter, Inman, Nebr.

Dear Sir, we are writing to urge you to support the O'Neill unit. Although we live outside of the designated area, we live close enough to have our wet meadow dry up from intensive center pivot irrigation around O'Neill and the resulting drop in the water level.

We need the O'Neill unit to recharge our ground water. There have been many incidents of irrigation wells, as well as other wells drying up. Surely we must not let this Nation's breadbasket dry up as happened in Texas where the wells ran dry.

Let's stop appropriating money to Communist countries and think of America first.

STATEMENT OF MR. AND MRS. C. W. RIPLEY, SPRINGVIEW, NEBR.

Dear Senator Hatfield, we write to thank you for your past support of the O'Neill unit. We would ask for your continued support for funding and early construction of the O'Neill unit.

This completed project will have many important benefits to the local area, the State of Nebraska, and the Nation as a whole. There is an urgent need to recharge our ground water levels which will, in turn, improve the ground water quality.

Our firm belief is that there are no substitute alternatives to the O'Neill unit. We believe that all the people and agencies who have studied and planned the O'Neill unit have come up with the best plan to date and one which will most nearly fulfill the requirements as set up in the Pick-Sloan plan for the Missouri River basin.

Thank you for your past support.

STATEMENT OF MICK HEISS, PAGE, NEBR.

Dear Senator Hatfield, I am writing you this letter because I feel a strong need for the Norden Dam project. I am a grain farmer and cattle feeder in the Page, Nebr., area, and have seen ground water in the area decline quite rapidly in the past years. There is a great need to recharge our ground water with the surface water that flows by us every day.

The Norden Dam project will not only be a benefit for agriculture, but will create a beautiful recreation, as well as a fish and wildlife resource for us all.

Local support of the project has always been strong. So let's try and save this valuable resource before its too late.

With this, I give my full support of the O'Neill unit.

STATEMENT OF MRS. HELEN REDIES, SPRINGVIEW, NEBR.

Dear Sir, I think we need the Norden Dam. We have quite a few young men that need work here. I have lived here 33 years in Springview.

I know it will help the young people from going to other States. We need the young people to help us old people. Please, I like to see the Norden Dam.

I am 79 years. I like to fish as there is nowhere else to fish.

Thank you.

STATEMENT OF STEVE LANGAN, ATKINSON, NEBR.

Sir, I support funding for the O'Neill unit.

STATEMENT OF HOWARD S. CARR, SPRINGVIEW, NEBR.

Dear Senator Hatfield, the State of Nebraska and the Springview and O'Neill areas need the O'Neill project for many reasons and encourage your support for continued funding.

Water must be conserved for future generations as well as our present generation. Nebraska water is leaving the State which is needed and wanted in other areas and undoubtedly will be used if we don't.

We are losing populations every year, putting stress on the schools because of fewer pupils; also on young people who want to stay in the area.

Recreation created by the dam would, in turn, offer many service jobs as well as give our area's agriculture base a very big lift and, consequently, a larger tax base.

If we want to continue to prosper in the future—and we do—our biggest asset—water—will be gone if this project is not completed and the area will not have a chance to stay alive.

Please support the O'Neill irrigation project.

STATEMENT OF KENDALL SMITH, ATKINSON, NEBR.

Sir, I surely support the Norden Dam.

STATEMENT OF JAMES T. MCDONALD, O'NEILL, NEBR.

Dear Senator Hatfield, I've lived in this area all my life except for 3¾ years during World War II. In the 1930's, pheasants were plentiful, fish fair, and even a few prairie chickens.

Now, after a lot of private irrigators, we have fewer pheasants, more prairie chickens, lots of deer, and quite a few turkeys. Fishing stayed basically the same, except where it has been improved by dams.

I definitely feel that irrigation has been a great improvement to the quality of life in our area. We need the O'Neill unit. Please support fiscal year 1982 for fiscal year 1984.

STATEMENT OF ELMER BORER, ATKINSON, NEBR.

Dear Mr. Hatfield, I strongly support the Norden Dam and Reservoir. It is desperately needed to recharge the Ogalla aquifer. Water is one of our most precious resources. Let us be wise and store it in a fresh, clean environment.

STATEMENT OF HAROLD L. FRICKEL, ATKINSON, NEBR.

Sir, as chairman of the Appropriations Committee, I hope you undertake the task of seeing that funding for the O'Neill unit will continue.

STATEMENT OF JAMES F. TORPY, ATKINSON, NEBR.

Dear Senator Hatfield, I am writing to let you know I am in favor of the Norden Dam project. I feel it will boost the economy in this area.

STATEMENT OF DALE T. O'CONNELL, O'NEILL, NEBR.

Dear Senator Hatfield, I am trying to be as moral and conscientious as I can be in considering my position on the Norden Dam-O'Neill unit project. I keep coming up with the same conclusion: The present final proposal is the only viable and cost-effective alternative. Please support continued funding and construction of the O'Neill unit.

I cannot accept as reasonable any underground solution inasmuch as it does not hold back the surface water. Having been raised in western Pennsylvania, I recognize the importance of managing and controlling surface water.

I cannot accept as reasonable the environmental argument that the dam and resultant lake would be harmful. To the contrary, they would enhance the environment without basically altering it.

And, I can see only an increase in Nebraska's economy in line with or beyond the proposal's already cautious cost-benefit ratio. Living here. I know that one small business can improve a whole community. One large investment in the dam will favorably affect the whole economic area of the Sandhills and net both Nebraska and the Federal Government a quite favorable return.

Build the dam.

STATEMENT OF RICH WALTERS, SECRETARY-TREASURER, SANDHILLS ROD & GUN CLUB

Dear Senator Hatfield, The Sandhils Rod & Gun Club of Ainsworth, Nebr., one of the most active sportsmen's clubs in the State of Nebraska, is asking for your support to continue funding and, hopefully, start construction on the Norden Dam and the O'Neill irrigation unit. This project is very much needed for not only the immediate area, but also the State and Nation as a whole. We desperately need some of our tax dollars spent here at home to create jobs on a most worthwhile project.

The O'Neill unit-Norden Dam is a much overdue project for the conservation of a precious natural resource, which is water, but also to create a tremendous recreational area. The potential for additional jobs and the revenue and tax base derived from the recreational aspect alone would be considerable.

The O'Neill unit-Norden Dam project has been examined and discussed for years. Alternatives have been proposed and studied with the final result still being the Norden Dam is a sound engineering project.

We, the citizens and taxpayers who actually reside in the area affected by the Norden Dam, strongly urge your consideration and support of this long-overdue project so construction could start in the very near future.

STATEMENT OF FRANK D. MCMULLEN, JR., OMAHA, NEBR.

Dear Senator Hatfield, We urge your support for appropriations and construction of the O'Neill unit, commonly known as the Norden Dam.

The future of our State is inevitably tied to agriculture and irrigated land is extremely important to Nebraska. The Norden Dam would provide irrigation for 77,000 acres of farmland.

A recent study by our chamber projects the impact of agribusiness on the metropolitan economy will be $4.2 billion by the year 1985. This impact comes from all parts of our State, including the O'Neill area.

The High Plains study pointed out that Nebraska must carefully manage its water resources if irrigation is to continue growing into the next century. The reservoir to be created by the Norden Dam would provide underground water recharge for 180,000 acres.

Please give this project your support.

STATEMENT OF F. H. SHIFIERMILLER, M.D., AINSWORTH, NEBR.

Dear Sir, I would like to ask for your support for the O'Neill irrigation project.

This project, as you probably know, has one of the best benefit-cost ratios of any project being considered. Especially now with the need for more jobs to help the economy and the need to make good use of our water resources, it is important that this project be built.

The project will help not only the immediate area, but the entire State of Nebraska, and the Nation as well.

STATEMENT OF C. R. HILL, O'NEILL, NEBR.

Dear Sir, this letter is written in support of the O'Neill irrigation unit and the construction of the Norden Dam. It is not so much that this project will irrigate additional acres as it is that irrigation now being done in northern Nebraska will be blessed with a plentiful supply of water because of this additional supply of water for a long time in the future versus water supplies being limited, which, in turn, will reduce the amount of land irrigated and reduce the economy of this area to a barren, dry-range economy.

With the need for additional jobs to further spur the economy, now is the opportune time to complete this project.

STATEMENT OF MARK LEED, ATKINSON, NEBR.

Dear Sir, please support us with the Norden Dam project here in the O'Neill area. This project already has been authorized and basically planned.

We need to keep our greatest natural resource—water—here in our State. At the moment, we have a surplus of food, but with a few dry years and more demand for food overseas, it could end. Our soil is sandy and without irrigation in this area; our crops would soon die. We depend on our water supply. Please help.

LETTER FROM J. B. GRADY, PRESIDENT, O'NEILL (NEBR.) NATIONAL BANK

MARCH 24, 1983.

Senator J. JAMES EXON,
U.S. Senate, Washington, D.C.

DEAR MR. EXON: I am sorry that we cannot agree with you in regard to the alternative of the Nature Conservancy Group, in place of the Norden, O'Neill reclamation project. I cannot see the feasibility of this alternative.

We have worked on this project for some 40 years and it seems to me that with the complete assistance from both Senators and the Representatives, along with the Governor of this State, that this project would be now a reality.

I can well understand the objections of some people in regard to crops, et cetera, now being in surplus, but we are talking about the future of this country, not the present. You need only to read of what is happening in Australia, Africa, and South America, not to mention Russia, to know what the value of irrigation is now and what it will be in the future. The droughts that are now affecting these countries could be ours sometime in the future. Then this water may have the same value as oil on present-day markets.

I believe that this is the time for you to take the lead and to try and get this project moving for all of Nebraska.

Very truly yours,

J. B. GRADY, *President.*

STATEMENT OF PAUL F. SEGER, ATKINSON, NEBR.

Dear Chairman Hatfield, we are again urging you to support the O'Neill project which was initiated by Nebraskans. Local people want this project and it should not be a political battle. These same local people will repay the loan by direct payments and increased taxes.

This project is an investment in the future of Nebraska, contributing to its general welfare. Also contributing in other areas such as recreation, hydroelectric power, preserving of our most precious resource from leaving our State, water for industrial and municipal purposes.

All efforts used to promote this project would be appreciated by all people affected by agriculture, which is everyone in this State.

STATEMENT OF MR. AND MRS. REGINALD PINKERMAN, O'NEILL, NEBR.

Dear Mr. Hatfield, I am writing this letter in support of the O'Neill irrigation unit.

We have a family of three sons; two are married and one is in high school. We are very concerned for them and their families. We believe this project could be very beneficial to all people of this area.

We think that we need this project in order for the people in this area to support their families and to make a decent living. Lets not worry about the cranes, canoers, and such.

We have had a business in O'Neill for 27 years. I have written these offices many times. Thank you for your past help and please help us again.

Thank you.

STATEMENT OF ROBERT D. CLEMENTS, O'NEILL, NEBR.

Dear Senator Hatfield, with regard to the appropriation hearings for fiscal year 1984, we request your support for the O'Neill unit of the Norden Dam project, located in north-central Nebraska.

This project, with it's effective benefit-cost ratio, not only would be beneficial to this area, but to the State of Nebraska and the United States as a whole.

Thanking you.

STATEMENT OF VIRG LAURSEN, O'NEILL, NEBR.

Dear Mr. Chairman, your continued support for the O'Neill unit and Norden Dam will be greatly appreciated. We need this dam.

Thank you very much.

STATEMENT OF STEVEN G. SEGLIN, LINCOLN, NEBR.

Dear Senator Hatfield, I write to you to ask that you support the O'Neill unit which is not only important to us in Nebraska, but also important to the Nation as a whole.

As you may know, the O'Neill unit is a multipurpose water resources project which includes irrigation, recreation, flood control, fish and wildlife benefits, and social and economic development.

I hope that you will take a long and hard look at the benefits of the O'Neill unit and vote for the continued funding of the project.

STATEMENT OF MAURICE MOEN, O'NEILL, NEBR.

Dear Sir, we are writing in regards to the Norden Dam project, O'Neill unit. We strongly favor this project. Our company, Cargill, Inc., along with many other nationwide companies, farmers, ranchers, and local businesses all have a huge investment in this area and all have to depend on irrigation water to support it. Immediate action should be taken on funding this project and getting it off the ground.

Failure to implement this project would be the waste of a valuable resource. Without recharging the underground water supply in our area, we could be faced with contamination and lowered water tables that could seriously affect the living conditions in our area.

Again with our thanks for your time, we are asking for your immediate action.

STATEMENT OF R. T. AMIS, OMAHA, NEBR.

Dear Senator Hatfield, I would like for you to very favorably consider the O'Neill project, and in particular the Norden Dam, which is part of the above project. This project has one of the best cost ratios of any of the projects direly needed. The water table has been falling considerably in this area. This will be irrigating some 77,000 acres. In addition to this, it will furnish aquifer recharge for a total of about 180,000 acres according to the engineers at the University of Nebraska.

This will be the finest lake in the whole Midwest, with wonderful fishing, boating, and recreational facilities. Due to the way the land lies, there will be numerous shelter bays for the boating and fishing.

Last, and one of the most important things, the basic design which has already been completed on this job and has been authorized by both the Congress and Senate, would mean employment for thousands of people in this area that has basically an agrarian economy and is in bad economic straits at this time.

I urege you to support this project because it will help all of Nebraska, and particularly these distressed areas.

STATEMENT OF B. W. STROPE, O'NEILL, NEBR.

Dear Sir, I strongly request your continued support for funding of the O'Neill unit at the upcoming appropriation hearings.

Among the projects considered for construction in the United States, the O'Neill unit has one of the best benefit-cost ratios of any. This project would create hundreds of jobs over a lengthy period of time and would be a permanent asset for the agricultural economy, the most important industry in the United States.

Thank you for your consideration and assistance in this matter and, again, please continue your support of the O'Neill unit.

STATEMENT OF JAMES FALK, O'NEILL, NEBR.

Dear Senator Hatfield, I urge you to give your wholehearted support of the Norden Dam project in north-central Nebraska. The benefits of this vital project have been proven beyond reasonable doubts. Any further delays will only mean higher costs and numerous financial and recreational losses for our area.

The O'Neill unit has one of the best benefit-cost ratios of any project being considered for construction in the United States today.

The O'Neill unit is authorized and basically planned and it deserves your support for continued funding and construction.

Thank you for your assistance in this matter of concern to so many.

[From the Omaha World-Herald, Omaha, Nebr.]

CALAMUS DAM CREW EAGER TO GET ROLLING ON PROJECT

By Tom Allan, staff writer

BURWELL, NEBR.—Contractors and Bureau of Reclamation officials are getting ready for action again on the much-delayed North Loup irrigation project in the Calamus and North Loup River valleys.

Bob McClure, the bureau's project construction engineer, estimated that the present winter skeleton crews could be joined by as many as 500 workers, including contractor and bureau personnel, when work resumes in the next few weeks.

"Last year we had a total government and contractor payroll of about $168,000 a week, and I'm sure it's going to be bigger this year," McClure said.

Work is expected to resume at a double-shift pace by mid-March on the Calamus Dam, some six miles northwest of this Garfield County seat, and its Mirdan Canal. They are the two focal points of the North Loup Project, which is sponsored by the Twin Loups Reclamation and Irrigation District.

It is one of the state's largest dam and canal construction projects and one of the biggest in the nation currently administered by the Bureau of Reclamation. The accelerated construction activity is expected to provide an economic boom.

Bob McCabe, project engineer for the dam's prime contractor, Industrial Constructors of Missoula, Mont., said his winter crew of 30 to 35 workers is expected to grow to between 200 and 230. There were 180 here last year.

"We are advertising for skilled operators and carpenters for two eight-hour shifts a day, five days a week," he said. "We are anxious to get going. We want to be moving dirt by mid-March and in full operation between mid-April and May 1."

McClure and McCabe said the key to progress is good weather. Last year frequent rain slowed progress and took much of the steam out of the projected economic boom for area towns.

"We lost 107 work days because it was too cold or too wet between Dec. 1, 1981, and Dec. 1, 1982," McCabe said. "The dam project dropped behind schedule. It's now only 35 percent complete. We expected to be 60 percent done.

"This year, with a break in the weather, we hope to be 85 percent complete on the dam by year's end."

[From the Omaha World-Herald, Mar. 28, 1983]

THE PUBLIC PULSE: "WATER NOT AVAILABLE"

Regarding the Nature Conservancy's proposed alternative to the Norden Dam: I have been in the water well drilling business in the Keya Paha, Rock, Brown and Cherry Counties region for more than 30 years. In order for the 196 irrigation wells in the proposal to supply water to 67,000 acres in the O'Neill area with a minimum of six gallons per acre per minute, they would have to produce well over 2,000 gallons per minute per well.

It has been our experience in this area that it is very hard to find stock or domestic wells that will produce five to 10 gallons per minute. In the area of the Nature Conservancy's proposal, the best irrigation well we have drilled produced only 550 gallons per minute, and this well was more than four miles south of the river.

Even if the underground water were available to be pumped—and it is not—it would take about 13,000 horsepower just to pump the water to the top of the river canyon. If the pumping level in the wells was 100 feet below the surface, it would take another 13,000 horsepower just to pump the water out of the ground. At today's cost, it would cost $1,872,000 for an average 1,200-hour pumping season just to pump the water to the top of the canyon.

It is ludicrous to spend more taxpayer money for the study of a proposal that any well driller in north-central Nebraska could tell you would not work.—Jerry Beck.

NEBRASKA WATER RESOURCE PROJECTS

STATEMENT OF JACK ODGAARD, EXECUTIVE VICE PRESIDENT, NEBRASKA WATER RESOURCES ASSOCIATION

Senator JOHNSTON. Next we have Jack Odgaard who is executive vice president of the Nebraska Water Resources Association.

Mr. ODGAARD. Thank you very much Mr. Chairman.

I did bring another gentleman, Earl Roland. I bring you greetings from your former colleague, Senator Curtis. From the time that I worked for Senator Curtis, we always appreciated your tremendous support for our projects in the State of Nebraska.

O'NEILL UNIT, NEBRASKA

Today, I will be very brief and summarize from the prepared statement I have with the packets that were handed out for the committee. I will summarize this and begin by saying that I do represent the more than 5,000 members of the Nebraska Water Resources Association, specifically testifying in support of continued funding for the O'Neill project. The previous witnesses alluded to the strong local support and for as long as I can remember, Mr. Chairman, the first and foremost condition of congressional and Federal support for water projects has been that there be local support for the project.

LOCAL PROJECT SUPPORT

And the O'Neill unit has that strong support as mentioned in the elections in 1979 when it received a 78-percent approval of the local people. Last year the Nebraska Legislature Public Works Committee held a hearing on the O'Neill project to determine the degree of public support and opposition there might be for the project. That hearing drew 53 witnesses representing more than 300,000 people in support of the O'Neill project. That compared with 13 individuals opposed to the project, and 12 other persons speaking for environmental clubs and groups representing a total of just over 3,500 people.

So, the support in that testimony for the O'Neill project was nearly 100 times greater than was the opposition.

It is significant to point out that the support for the project included all the town and county boards in the project area, all of the natural resources districts in the area, those agencies charged with implementing soil and water programs for the State of Nebraska.

Chambers of commerce, sportsmen groups, labor organizations, and numerous statewide agriculture and business organizations.

So I think there is no doubt about the strong support in Nebraska for the project. Three other important factors should be discussed here: The tremendous job opportunities and economic impacts of building a water project, future implications if the O'Neill project is not built, and the future agriculture needs of the United States.

The O'Neill project will provide a median employment of 700 jobs directly in the construction of the project. The associated impact in services and supplies retail and wholesale businesses will provide thousands of jobs over the next 10 years during project construction. And if the court injunction is lifted as we expect this year, that project can be underway by next year and those jobs can come on the market within a year. And this comes when the Congress is very concerned about high unemployment.

AGRICULTURAL PRODUCTION

The material in the package you have shows a tremendous loss in irrigation and ultimately agricultural production in a large area of Nebraska if the O'Neill project is not built. While the project is designed to deliver surface water to 77,000 acres, it will actually enhance and maintain an area of 189,000 acres of irrigated agriculture.

According to the High Plains Ogallala aquifer study I just completed and presented to the Congress, the six-State area—Texas, New Mexico, Oklahoma, Kansas, Colorado, and Nebraska—will lose nearly 6 million acres of irrigated agriculture production by the year 2020 unless something is done. The O'Neill project area is part of that area that will lose production because of insufficient water.

The American Farmland Trust in 1981 said that more than 3 million acres of prime farmland are being taken out of production each year in the United States for urban growth and expansion. If that rate continues, in less than 20 years there will be no prime farmlands left in the States of Florida, New Hampshire, and Rhode Island and other States from New York, New Mexico, to California will have vast reductions in farmland. In 20 years, the United States can have as much as 60 million fewer acres cultivated, 60 million. Projects such as the O'Neill unit should be viewed as developments in the future in the event that the farmland agriculture will not be able to meet our food needs.

In the meantime, I was happy to hear the gentlemen testify on the lower Mississippi River ports, because, as you well know, our agriculture is our major export item and the greatest single offset in our balance of trade and we hope that will continue. We urge continued funding of the O'Neill project. We thank the chairman for his past support and I particularly call to your attention those items in the packet including that list of supporters who testified at that hearing last year compared to opponents. The recent newspaper article and other material.

With that Mr. Chairman, Mr. Roland would like just a couple of minutes.

[The statement follows:]

STATEMENT OF JACK ODGAARD, EXECUTIVE VICE PRESIDENT, NEBRASKA WATER RESOURCES ASSOCIATION

Thank you, Mr. Chairman and members of the Committee. I'm Jack Odgaard, here today representing the more than 5,000 members of the Nebraska Water Resources Association urging your support for appropriations for the O'Neill Unit reclamation project. I have packets of material for you and the items in these packets will reference my testimony.

For as long as I can remember, the first and foremost condition of congressional and federal support for water projects has been that there be local support for a project. The O'Neill Unit has that strong support, and in elections in 1979 it received 78% approval by the local people -- seventy-eight percent.

Last year the Nebraska Legislature for the first time held a hearing on the O'Neill project to determine the degree of public support and opposition there might be to the project. That hearing drew 53 witnesses representing more than 300,000 people in support of the O'Neill project. That compared to 13 individuals opposed to the project, and 12 other persons speaking for environmental clubs and groups representing a total of 3,580 people.

In other words, the support in that testimony for the O'Neill project was NEARLY 100 TIMES GREATER than was the opposition. I think it is significant to point out that the support for the project included the town and county boards in the project area, all of the natural resources districts in the area, chambers of of commerce, sportsmen groups, labor organizations, and numerous statewide agriculture and business organizations.

While there is no doubt about the tremendous support there is for the O'Neill project, three other important factors should be discussed here: the tremendous job opportunities and economic impacts of building such a water project, the future implications if this project is not built, and the future agriculture needs of the United States.

Last year construction got underway on the North Loup Division reclamation project in central Nebraska. In the first nine months, construction of that project provided more than 200 jobs, and that number is expected to expand to 500 jobs this year. Besides the long-range jobs these projects provide over the 10 years needed for construction, consider the additional economic impacts including hundreds of additional jobs associated with services and retail and wholesale business associated with project construction.

A look at the associated impact from the North Loup construction last year shows the tremendous benefits in just one community alone--the town of Ord. There were 30 new single family homes built, a new 27-unit motel built, three new retail businesses opened, a new grain elevator, and a new equipment service business. Several other businesses expanded during that time, and countless of additional local retail jobs were made possible because of that construction.

The story will be similar for the O'Neill project that will privide a median employment of 700 jobs directly in the construction of the project. Considering the associated jobs in services and supplies, the O'Neill project will provide thousands of jobs over the next 10 years during its construction. And, this comes at a time when the Congress is concerned about high unemployment.

The final two points I will make address what we have been hearing in the past few years -- that the nation is facing a major water crisis. This relates to the O'Neill project because of the future implications if this project is not built. Material in the packets you have shows the tremendous loss in irrigation and, ultimately agricultural production in a large area of Nebraska if the O'Neill project is not built. While this project is designed to deliver surface water to 77,000 acres, it will actually enhance and maintain an area of 189,000 acres of irrigated agriculture.

Closely associated with the second point is the third and final major point--the future of agricultural production and U.S. food needs.

According to the High Plains Ogallala Aquifer study just completed and presented to the Congress, the six-state area of Texas, New Mexico, Oklahoma, Kansas, Colorado, and Nebraska will lose nearly six million acres of irrigated agriculture production by the year 2020 unless something is done. The O'Neill project area is part of that area that will lose production because of insufficient water.

In 1981, the newly formed American Farmland Trust said that more than three million acres of prime farmland are being taken out of production each year in the U.S., and giving way to urban growth and expansion. The Trust said that if that rate continues, in less than 20 years there will be no prime farmland left in the States of Florida, New Hampshire, and Rhode Island, and other states from New York to New Mexico to California will have vast reductions in farmland.

When that happens, where will the U.S. obtain the food it needs? Clearly, projects such as the O'Neill Unit--in states such as Nebraska that are not experiencing the urban growth of metropolitan states, and that have highly productive soils--will be the answer to our future-food needs.

I am aware of the arguments by opponents of water projects that we have a huge surplus at present and we shouldn't be building water projects to grow more food. But, members of the committee should remember that it was just a few years ago--in 1978--that the U.S. corn reserve was down to 600 million bushels and the Congress was beginning to think we would run out of food. A situation with a surplus can change in one or two years; and when we're talking long-range, with 10 years required to build a reclamation project, then we must look to the long-range and the projections for the future.

In 20 years the U.S. could have as much as 60 million fewer acres cultivated--sixty million. It would seem to me that we would want to look at projects such as the O'Neill Unit as investments in the future for that time when the farmlands and agricultural production of the nation otherwise may not be able to meet our food needs. And, in the meantime any surplus production can continue to be exported and help with the U.S. balance of trade, for which agriculture has done much in the past decade.

We urge the continued funding for the O'Neill Unit as an investment in the nation's future. In closing I would direct your particular attention to those items in the packets including the list of support versus opposition to the O'Neill project in the 1982 Nebraska Legislature's hearing; the newspaper articles on the economic impacts and jobs from construction of the North Loup project, the future of the O'Neill area without the O'Neill project, the brochures on the project and the ground water map of Nebraska.

Thank you!

LEGISLATIVE RESOLUTION 202

To hear testimony on the merits and demerits
of the O'Neill Unit reclamation project

February 26, 1982 Hearing
Nebraska Legislature

PROJECT SUPPORT TESTIMONY

SUMMARY:

1. Local Government Entities.	Total: 8		Population:	36,372
2. Area and State Government Entities.	Number: 8	Area: 9,541,419 acres	Population:	160,000
3. *Statewide Water and Resources Organizations.	Number: 3	49 Districts	Members:	1,744
4. Area and Other Water Organizations.	Total: 5		Members:	3,525
5. *Statewide Agricultural Organizations.	Total: 9		Members:	34,532
6. Business and Labor Organizations.	Total: 9		Members:	59,287
7. Sportsmen Organizations.	Total: 2		Members:	300
8. Other Local Organizations.	Total: 2		Members:	1,003
9. Individuals.	Total: 8		Number:	8

TOTALS: 8 individuals; 45 representing 47 organizations; * 296,771 Members

*Membership shown does not include 10,000 farmer-members represented by 45 irrigation district members of the Nebraska State Irrigation Association in number "3" above.

Membership shown does not include individual total memberships of 26 statewide agricultural organizations represented by the Agriculture Council of Nebraska in number "5" above.

DETAILED SUPPORT TESTIMONY:

1. LOCAL GOVERNMENT ENTITIES.

(a) County Boards:

		Population
Brown County Board Ainsworth, Nebr.	John Reynolds	4,377
Cherry County Commissioners Valentine, Nebr.	Bill Ward	6,758
Holt County Board of Supervisors, O'Neill, Nebr.	Fred Krugman	13,552
Keya Paha County Board Springview, Nebr.	Tim Stephen	1,300
SUB-TOTAL:	4	25,987

(b) City Councils:

		Population
Ainsworth City Council	Richard Buckley	2,200
O'Neill City Council	Bill Mattern	5,000
Springview Village Board	C. W. Ripley	285
Valentine City Council	Allen Sedivy	2,900
SUB-TOTAL:	4	10,385

2. AREA AND STATE GOVERNMENT ENTITIES.

(a) Natural Resources Districts:

		Area (acres)	Population
Lower Elkhorn NRD Norfolk, Nebr.	Steve Oltmans	2,629,120	114,590
Lower Niobrara NRD Butte, Nebr.	Keith Drury	1,699,200	7,500
Middle Niobrara NRD Valentine, Nebr.	Dale Baker	2,906,880	9,320
Upper Elkhorn NRD O'Neill, Nebr.	Paul Mann	1,982,080	17,290
SUB-TOTAL:	4	9,217,280	148,700

(b) Irrigation and Reclamation Districts:

Ainsworth Irrigation District, Ainsworth, Nebr.	Brent Johnson	34,539	1,000
Niobrara Basin Irrigation District, O'Neill, Nebr.	Elroy Thieszen	104,700	2,000
North Central Nebraska Reclamation District, Springview, Nebr.	Jim Frerichs	184,900	8,300
SUB-TOTAL	3	324,139	11,300

(c) State Entities:

Public Advisory Board to the Nebraska Natural Resources Commission	Don Steen Morrill, Nebr.

3. STATEWIDE WATER AND RESOURCES ORGANIZATIONS.

		Members
Nebraska Association of Resources Districts Lincoln, Nebr.	Lee Orton	24

(Includes all of the state's 24 Natural Resources Districts with responsibility for water and natural resources conservation; 24 districts; 400 directors)

		Members
Nebraska State Irrigation Association Holdrege, Nebr. (Represents 45 irrigation districts, with one million acres and 10,000 farmer-members)	Don Long	244
Nebraska Water Resources Association Lincoln, Nebr. (Represents numerous irrigation, rural electric, public power, and area water organizations comprising most of the state)	Jack Odgaard	1,500
SUB-TOTAL	3	1,744

4. AREA AND OTHER WATER ORGANIZATIONS.

		Members
Lower Loup-Platte Basin Association Columbus, Nebr.	Dwayne Smith	15
Niobrara River Basin Development Association, Ainsworth, Nebr.	Leo Beattie	200
Norden Dam Association Atkinson, Nebr.	Gerald Winings	150
Northeast Nebraska Irrigators Association, Hartington, Nebr.	Dave Hoesing	160
North Platte Valley Irrigators Protective Association, Mitchell, Nebr. (21 districts)	Ray Russell	3,000

5. STATEWIDE AGRICULTURAL ORGANIZATIONS.

		Members
Agriculture Council of Nebraska Lincoln, Nebr. *(26 statewide agricultural organizations)	Frank Johannsen Bayard, Nebr.	*
Nebraska Chapter of the American Society of Farm Managers and Rural Appraisers, North Platte, Nebr.	Jim Paulson	150
Nebraska Corn Growers Association Grand Island, Nebr.	Jerry Carpenter	812
Nebraska Farm Bureau Federation Lincoln, Nebr.	Wendell Gangwish Wood River, Nebr.	24,850
Nebraska Fertilizer and Ag Chemical Institute, Lincoln, Nebr.	Jim Mahoney	800
Nebraska Land Improvement Contractors Association, Seward, Nebr.	Bill Hartmann Garland, Nebr.	220
Nebraska Livestock Feeders Association, Lincoln, Nebr.	Dennis Richters Utica, Nebr.	3,000
Nebraska Stockgrowers Association Alliance, Nebr.	Paul Hoeff	3,200
Nebraska Wheat Growers Association Ogallala, Nebr.	Frank Johannsen Bayard, Nebr.	1,500

6. BUSINESS AND LABOR ORGANIZATIONS.

(a) Chambers of Commerce:

		Members
Ainsworth Chamber of Commerce, Ainsworth, Nebr.	Tom Broeckelman	110
Columbus Chamber of Commerce, Columbus, Nebr.	Chuck Farnham	377
Lincoln Chamber of Commerce Lincoln, Nebr.	Bob Harris	1,500
Norfolk Chamber of Commerce Norfolk, Nebr.	Anne Russell	775
Omaha Chamber of Commerce Omaha, Nebr. (2,100 firms; 3,800 individuals)	Wes Furrer	5,900
O'Neill Chamber of Commerce O'Neill, Nebr.	Terry Lindstrom	100

Scottsbluff-Gering United Chamber of Commerce, Scottsbluff, Nebr.	H.W. Baird	400
Valentine Chamber of Commerce, Valentine, Nebr.	Ray Eickhoff	75
SUB-TOTAL	8	9,287
(b) Labor Organizations: Nebraska AFL-CIO Omaha, Nebr.	Gordon McDonald	50,000

7. SPORTSMEN ORGANIZATIONS.

		Members
Niobrara River Sportsmen Association, Ainsworth, Nebr.	Harlin Welch	200
Sandhills Rod and Gun Club Ainsworth, Nebr.	Harlin Welch	100
SUB-TOTAL	2	300

8. OTHER LOCAL ORGANIZATIONS.

		Members
Farmer-Rancher Co-op Association Ainsworth, Nebr.	Dwayne Bramer	985
Involved Women of Brown County Ainsworth, Nebr.	Mary Jo Curtis	18
SUB-TOTAL	2	1,003

9. INDIVIDUALS.

Bernard Miles, Valentine, Nebr.	Landowner; Director, Middle Niobrara NRD
Larry Anderson, Elgin, Nebr.	Farmer; Director, Norfolk Federal Land Bank Board
E. W. Davis, Ainsworth, Nebr.	Citizen
Larry Rice, Ainsworth, Nebr.	Owner, KBRB Radio Station
Jim Cook, Mills, Nebr.	Landowner; Director, Lower Niobrara NRD
Ramona Kamas, Ainsworth, Nebr.	Businesswoman
Gerald Ehlers, Ainsworth, Nebr.	Superintendent of Schools
Clayton Lukow, Holstein, Nebr.	Chairman, Nebraska Water Coalition.

PROJECT OPPOSITION TESTIMONY

1. ORGANIZATIONS.

		Nebraska Members
National Audubon Society, West Central Region	Ron Klataske Manhattan, Kans.	2,000
Audubon Society of Omaha	Sandra Kovanda Omaha, Nebr.	
Big Bend Audubon Society	Alice Heckman Kearney, Nebr.	
Wachiska Audubon Society	Tim Knott Lincoln, Nebr.	
Sierra Club, Northern Great Plains Conservation Committee, Denver, Colo.	Robert Warrick Meadow Grove, Nebr.	
Sierra Club, Nebraska Chapter	Faye Sitzman Omaha, Nebr.	1,000
Save the Niobrara River Association Bassett, Nebr.	Evelyn Barnes Lincoln, Nebr.	400
Wildlife Society, Nebraska Chapter Lincoln, Nebr.	Joe Gabig Lincoln, Nebr.	60
Nebraska Water Conservation Council Lincoln, Nebr.	Francis Moul Syracuse, Nebr.	10
Nebraska Tax Limit Coalition Omaha, Nebr.	Ed Jaksha Omaha, Nebr.	

Nature Conservancy Arlington, Va. (claimed 80,000 members nationally)	Tyrone Harrison Lincoln, Nebr.
University of Nebraska Wildlife Club Lincoln, Nebr.	Tom Christianson 110 Lincoln, Nebr.

2. INDIVIDUALS.

Loren Wilson, Lincoln, Nebr.	Businessman; Pres., Lincoln Chapter of Save the Niobrara River Association
Ernest Rousek, Lincoln, Nebr.	Part landowner; Wachiska Audubon Society
Franklin Egelhoff, Norden, Nebr.	Landowner
Kerri Barnes, Lincoln, Nebr.	Granddaughter of Mr. Egelhoff
Heber Waldron, Lincoln, Nebr.	Citizen
Kristin Hoffman, Omaha, Nebr.	Citizen
Norman Behrens, Crete, Nebr.	Citizen
Beryl Kuhre, Johnstown, Nebr.	Landowner
Kenneth Emry, Ainsworth, Nebr.	Landowner; Save the Niobrara River Assn.
Lloyd Fischer, Lincoln, Nebr.	University of Nebraska professor
Len Schropfer, Milligan, Nebr.	Citizen
Beth Spaugh, Eagle, Nebr.	Chairperson, Bluestem Sierra group, Lincoln
Loring Kuhre, Johnstown, Nebr.	Landowner, Save the Niobrara River Assn.

ATKINSON-O'NEILL AREA IRRIGATED AGRICULTURE FUTURE WITH AND WITHOUT THE O'NEILL UNIT

SUMMARY ANALYSIS FROM GROUND WATER STUDIES OF THE U.S. BUREAU OF RECLAMATION

As part of the Alternatives Study for the O'Neill Unit reclamation project, published in October, 1981, the U.S. Bureau of Reclamation undertook ground water studies to determine ground water conditions and recharge. The following description is taken from page 15 of that report:

"Description of Ground-Water Model"

"Future ground-water conditions were simulated using a digital ground-water model of the Atkinson-O'Neill area. The model uses finite-difference methods and is based on the Prickett-Lonnquist Models which were modified to simulate water table conditions in an aquifer with two hydraulically connected geologic formations having different hydraulic properties. Node spacing in the model was 2,640 feet or a node area of 160 acres. The data base for the model was developed from geologic investigations conducted as part of the O'Neill Unit feasibility investigations."

SUMMARY ANALYSIS

The O'Neill Unit reclamation project is designed to deliver surface water by gravity flow to directly irrigate 77,000 acres of farmland in Kaya Paha and Holt Counties. Approximately 8,000 acres of the project are located in Kaya Paha County around Springview, Nebraska. The majority of lands, 69,000 acres, will be in the area north of and from Atkinson to O'Neill, within the Niobrara Basin.

The model study of ground water conditions was done in the Atkinson-O'Neill area, and encompassed a total of 189,000 acres. The difference in total irrigable acres (those lands capable of being irrigated) with and without the project was found to be 19,000 acres. With the O'Neill project in place, 189,000 acres of farmland could be irrigated. Without the project, 170,000 acres could be irrigated. What that represents is 19,000 acres in the area that does not now have a ground water supply, and those 19,000 acres are all included in the O'Neill Unit as presently authorized and designed.

With the O'Neill project built, the future irrigability of the area would include the 69,000 acres served by direct surface water delivery, and another 112,000 acres that would be irrigated by ground water. That is a total of 181,000 acres of irrigable land in the Atkinson to O'Neill area of the project, and takes into consideration that 8,000 acres of currently irrigable or irrigated land will still revert to dryland after the project is built. That reversion will occur in the fringe areas of the project lands, and at the fringe areas of the ground water aquifer in the area.

However, without the O'Neill project--that is, if it is not built--there will be great reductions in irrigable acres and much greater reversion to dryland farming. Of course, the 19,000 acres that do not now have ground water available is excluded, leaving a total of 170,000 acres of irrigable land in the Atkinson to O'Neill area. But, without the O'Neill project, studies show that 80,000 of those acres will lose irrigation, either by total depletion of the ground water reservoir now available, or by depletion to the point that it would no longer be economically feasible to pump any of the remaining water for irrigation purposes.

The ground water studies indicate that with the O'Neill project in place, those lands in the project area that will be able to be sustained with ground water irrigation--112,000 acres--will have an average pumping lift of 100 feet; but that without the project, those acres that will be able to have ground water irrigation--90,000 acres--will have an average lift of 209 feet.

The summary conclusions, then, are that WITH the O'Neill project in place, in the Atkinson to O'Neill area there will be 69,000 acres of farmland supplied with direct delivery of surface water for irrigation, and another 112,000 acres able to be irrigated by ground water with an average lift of 100 feet; and 8,000 acres of currently irrigable or irrigated land from ground water go out of production or revert to dryland conditions. That is a net sustained irrigation of 181,000 acres.

But, WITHOUT the O'Neill project, there will be NO farmlands served by direct surface water delivery including 19,000 acres that now have no access to ground water, and only 90,000 acres capable of being irrigated by ground water in the future, with 80,000 acres of currently irrigable or irrigated land being taken out of production or reverting to dryland conditions.

The net result of irrigation and agricultural production--just in the current O'Neill project area including those lands in the Atkinson to O'Neill area north of the Elkhorn River is 189,000 acres of irrigated agriculture WITH the O'Neill project in place, compared to 90,000 acres WITHOUT the O'Neill project. And, the difference between the surface delivery and ground water irrigation WITH the project, and the ground water irrigation only WITHOUT the project, will be 109 feet in lift for ground water irrigation.

The following chart shows the comparison of irrigation agriculture just in the Atkinson to O'Neill area with and without the O'Neill project:

	WITH PROJECT	WITHOUT PROJECT
Total irrigable acres	189,000	170,000
Surface acres irrigated	69,000	0
Ground water acres irrigable	112,000	90,000
Acres becoming non-irrigable	8,000	80,000
Ground water irrigation average lift	100 feet	209 feet

The recent studies of the High Plains Ogallala Aquifer Study Council further indicate widespread declines and reversions to dryland in the general area of the O'Neill Unit project if the project is not built.

[From the Wall Street Journal, Feb. 7, 1983]

UNLIKELY ALLIANCE: BIG BUSINESS IS FUNDS SOURCE FOR ENVIRONMENTALISTS

By KEN WELLS

Staff Reporter of THE WALL STREET JOURNAL

IN THE WILDERNESS NEAR BRANSCOMB, Calif.—Sunlight is a frail and fleeting visitor along the murmuring, dank bottomlands of Elder Creek, a narrow, glacier-cold stream tumbling through groves of massive, ancient redwoods and Douglas fir. Here, spongy green carpets of moss and lichen creep high into the branches of spindly oaks. Ferns lodge in unlikely places; mushrooms pop up in unseemly shapes and colors. Dusk perpetually drags in the fog.

"If Big Foot lives," a guide says fancifully, "he would live in a place like this."

These misty, primeval bottomlands are part of the Coast Range Preserve, 8,000 acres along the northern California coast that contain the state's largest remnant of uncut lowland Douglas-fir forest and a watershed so untouched by man that it is considered a national scientific treasure. A more remote place would be hard to find; one more strangely beautiful would be hard to imagine.

Indeed, few places in America are so unspoiled; and for the Nature Conservancy, keepers and co-owners of this preserve with the federal government, that is precisely the problem. A country whose wilderness, marshes and prairies once seemed endless finds itself today with sparse, rapidly dwindling remnants of pristine habitat. One example: About 40% of the nation's wetlands have disappeared, largely a result of development, in just the past three decades.

Unplowed Prairie

The prime business of the conservancy, a relatively unknown cousin in the environmental movement, is to identify and buy these "endangered lands"—not merely "open spaces" but the prairie never plowed, the forest never logged, the stream never polluted. Here at the Coast Range Preserve, the conservancy owns 4,000 acres outright; it persuaded the federal government, which owns the adjoining 4,000 acres, to designate the parcel "an area of critical environmental concern" and to allow the conservancy to manage the federal property.

Since its founding in 1950 by a small coalition of scientists and armchair naturalists, the private, nonprofit conservancy has saved about two million acres throughout the 50 states. It now has its eye on perhaps two million more. And to accomplish that goal, the conservancy has lately added sharply honed business acumen to the scientific inclination and romantic vision of its portfolio, thereby hoping to make its mission also the mission of big business.

Though environmental groups and business traditionally have mixed about as well as oil and water, the conservancy seems to be succeeding, generating more than $10 million in cash and millions more in land from corporations and corporate foundations in the last three years alone. That is happening largely because the organization has come to resemble a well-run corporation itself. Its officials have put on three-piece suits, hired first-rate managers, developed meticulous, pragmatic land-acquisition programs and pitched corporate giving to conservation as a practical, no-nonsense investment in corporate self-interest.

'Totally Nonpolitical'

More important, perhaps, the conservancy had kept its eye narrowly on its mission—to preserve critical habitat and the endangered species it often shelters—and its nose studiously out of traditional environmental politics. That has meant no stands to save whales or redwood trees; no criticism of industry for air pollution; no potshots at Interior Secretary James Watt.

"We are totally nonpolitical," says William D. Blair Jr., who runs the conservancy from its national office in Arlington, Va. The group is so nonpolitical, in fact, that Mr. Blair, a former journalist and one-time State Department officer, once turned down an invitation to the White House, he says, "to avoid any appearances of partisan politics."

Mr. Blair, who has the title of president, heads an organization that has 400 full-time employees, about 80 of whom work in the national office; the others are scattered throughout 26 state offices. That network is bolstered by 150,000 dues-paying members who belong to 35 volunteer chapters throughout the country. (Individual dues begin at $10; basic corporate membership costs $1,000.)

Today's conservancy hardly resembles the small group founded to preach the message that America's wild lands were rapidly disappearing—a message that three decades ago was ahead of its time and thus largely ignored. Members, however, quickly realized that preaching wouldn't do the job. And as the organization grew, so did its ambitions. By 1970, the conservancy, by then a broad-based environmental group, became convinced that it must take the lead in land acquisitions if the best examples of natural America were to be saved. But that would take money, much more than the conservancy had been able to raise from conventional sources.

So the organization began casting its eye toward one source traditionally shunned by other environmental groups—business. "Their position is cleverly conceived," says Nathaniel Reed, a Hobe Sound, Fla., businessman and former undersecretary of the Department of the Interior who has served prominently in the conservancy, the Sierra Club and numerous other environmental groups. "They approach businesses with an opportunity other groups can't match: That is, you can make a major grant in cash or land; you can invest in conservation; you can help save unique, lovely lands worth saving. And unlike, say, a Sierra Club or Audubon Society, the conservancy won't criticize or sue you for any of your past evil deeds."

That attitude no doubt helped the conservancy recently in obtaining a $1 million gift from Standard Oil Co. of California and an additional $500,000 from Getty Oil Co.—the largest conservation grants ever for both companies—to help buy vanishing river-forest habitat in south-central California. The conservancy also has tapped cash and land from mining concerns, timber companies, manufacturers and real-estate developers—businesses more used to assigning their lawyers, not their accountants, to conservation causes.

A year ago, the conservancy launched an ambitious five-year, $125 million fund-raising effort aimed at saving perhaps 1,000 large parcels of America's most endangered habitat. Though the majority of that money is likely to come from foundations—currently the conservancy's largest source of funds—the organization clearly expects to tap $20 million to $25 million from business and industry, amounts unheard of in the history of the environmental movement.

The conservancy's emphasis on corporate dollars is primarily the doing of its former president, Patrick F. Noonan, who came to the organization in 1969. By the mid-1970s, Mr. Noonan, a businessman and pragmatist, came to realize that new large and wealthy philanthropic foundations simply weren't being created. He had also noticed that corporations had given generously when the conservancy for the first time made a full-scale effort to raise money from Big Business for the organization's 1976 Bicentennial projects.

Today, Mr. Noonan's decision to pursue corporate donations seems all the more remarkable, says his successor, Mr. Blair, since the federal government, once the undisputed leader in the acquisition of parks and preserves, has all but gotten out of the business. The Reagan administration and Interior Secretary Watt have decided to postpone new land purchases—including many already authorized by Congress—in favor of an upgraded maintenance program for existing national parks and preserves.

Mr. Blair ticks off some quick figures: "Private and public spending on new lands has gone from about $125 million a year just a few years ago to only about $34 million today. Of that, two-thirds is coming from the nature conservancy."

Urban Sprawl

To make matters worse, the conservancy is firmly convinced that time is fast running out to save the best remaining examples of natural America. Population growth and its attendant urban sprawl, energy development, mining, road building, logging, the farming of marginal lands—all are gobbling up open space at a phenomenal rate. Two years ago, the conservancy spent an entire year physically inventorying the country's wild acreage and found that certain types of habitat still prominently listed in ecology books simply couldn't be found.

The conclusion: "Any ecological system you can name, there is a lot less of it," Mr. Blair says. "Of what remains, we have 10 years, 20 at the most, to save it. Beyond that, it's gone.

"And the burden of that," he adds, "rests clearly on the private sector. If it doesn't do it, it won't be done, ever."

Mr. Blair, however, is clearly buoyed by the private sector's response in California, whose conservancy affiliate undertook its own "critical areas" inventory three years ago—a project, in fact, upon which the national program is modeled. The state group identified 11 prime parcels and began an ambitious three-year, $15 million fund-raising effort to buy them. By the end of 1982, it had raised about $11 million, with commitments for the remainder likely over the next several months, says Peter Seligmann, the conservancy's California director and an architect of the program.

About half of the money came directly from corporate donors. Perhaps as important, however, were the influential corporate chiefs who joined the fund-raising force, knocking on the doors of friends in and out of business in support of what came to be called the California Critical Areas Program.

One of those businessmen was Leland Prussia, chairman of BankAmerica Corp., the nation's second-largest bank-holding company, who wrote a letter to every bank in California suggesting they put the conservancy on their year-end giving list.

Mr. Prussia, a third-generation Californian, counts himself among the numerous corporate heads in California who, as he puts it, have "an abiding interest" in the state's natural heritage but who had found little opportunity for that outlet. But the conservancy's businesslike approach—here is the land, here is why it's important, here is how we value it—swayed him.

"I was very impressed with the way they were going about things," says Mr. Prussia, who himself first learned of the conservancy's work from an old friend, David Packard, a founder and chairman of Hewlett-Packard Co., the California computer giant.

"What they do has a permanence to it," adds Mr. Packard, himself a prominent conservancy fundraiser, "and for corporations, it represents a different kind of involvement, an investment in conservation. Yet it's absolutely noncontroversial."

It didn't escape Mr. Packard and Mr. Prussia that the conservancy is a lean organization that keeps coming up with shrewd ways to stretch its money and inventive ways to raise it. The organization carries multimillion-dollar lines of credit at several New York banks but generally avoids debt. It has rigorously sought to keep a healthy cash reserve—currently about $29 million—in a revolving land-preservation fund that operates as a loan pool from which the state affiliates borrow to buy land. Affiliates are expected to repay the loans, at modest interest rates, within two years, or suffer a 16% interest penalty on the balance

The conservancy occasionally finances projects targeted by other conservation groups, and even the government, fixing interest charges at the prime rate. But it also is flexible. It recently lent $850,000 to a California developer—at below-market rates—in exchange for 42 acres of hilltop habitat sheltering several species of rare plants and flowers.

Endangered Manatees

Its ways of raising money are equally innovative. The conservancy long had used its tax-exempt status to entice companies to donate environmentally valuable lands. Two years ago, it decided any property would do and began soliciting donations for "anything surplus to the corporate portfolio," offering tax breaks in return. The program, called "Trade Lands," has generated about $9 million in deeds to date and has put the conservancy squarely in the real-estate business. It currently is pondering how to dispose most lucratively of 10 acres of prime residential property in the Florida keys, a mortgage on an office building in Boston and a gas station in California. It will "trade" the proceeds for properties like bat caves in Tennessee, river habitat for endangered manatees in Florida and coastal dunes in California.

The conservancy's growing take of corporate dollars hasn't gone unnoticed among other members of the environmental community. More strident observers, in fact, call it "blood money."

Michael McCloskey, national director of the Sierra Club, doesn't agree. "But I think they do tap conscience money," says Mr. McCloskey, whose organization has been more inclined to sue, than woo, corporations.

The conservancy's goals, however, "are laudable and they are doing some extremely important work," he adds. "They have saved lots of areas from the bulldozer, and that's what we like to see done. But there are other battles to be fought, and I think they in effect owe a moral debt to the rest of the environmental community for fighting them for them."

Mr. Blair chafes at the criticism, noting that the conservancy "fights like a wounded tiger when it has to." Recently, he says, the organization has been intensively lobbying Congress to stop a controversial dam project that threatens to flood its largest preserve, a 55,000-acre tract of prairie along the Niobrara River in Nebraska.

He even rejects the term "conscience money."

"All charitable giving is 'conscience money' of one form or the other, and I don't even care," Mr. Blair says. He is fond of quoting a former conservancy official whose reply to critics was, "You say it's tainted money? I say 'tain't enough."

[From the Omaha World-Herald, June 27, 1982]

WORK ON CALAMUS FORGES AHEAD

Burwell, Neb. — While Nebraska's Norden Dam project remains embroiled in controversy, some 70 miles away giant earthmovers are building the Calamus Dam, the focal point of the North Loup irrigation project.

The dam, which will be 85 feet high and 6,400 feet long, will create a reservoir on the Calamus River that will impound 5,148 surface acres of water, according to Bureau of Reclamation officials.

That would make the reservoir about twice as big as Sherman Reservoir near Loup City or Merritt Reservoir southwest of Valentine.

The irrigation project is sponsored by the Twin Loups Reclamation and Irrigation District. Its cost has been estimated at $141.7 million, based on 1978 prices. Of that, the dam and reservoir involve an estimated $35.4 million, said Robert McClure, the bureau's project construction engineer.

If work progresses as expected, the reservoir should be open in 1984, he said. It will be 10 miles long and up to 1½ miles wide with about 36 miles of shoreline. The dam is six miles northwest of this Garfield County seat.

Completion of the total project will allow irrigation of about 53,000 acres of farmland in five counties — Valley, Howard, Sherman, Nance and Merrick, according to the bureau.

Included in the rest of the project are the 103-foot-high, 2,900-foot-long Davis Creek Dam and Reservoir 6 miles south of North Loup. It also will include some 150 miles of canals and 212 miles of laterals.

Total project completion is scheduled for 1990 or early 1991, but McClure said it's hoped delivery of some irrigation water can be made by 1984.

Bill Pierson, the bureau's dam project chief, said spring rains have delayed construction "a little but the contractor is getting back on schedule. They are working 10-hour shifts."

Large earthmovers called "belly dumpers" lug 70-cubic-yard loads around the site. Clay-like, impervious soil is being hauled from a borrow pit 3 miles for an up-stream "blanket."

Preparations have been made for a slurry trench to be dug to bedrock by a subcontractor. A core trench has been made across the dam foundation, which will be back-filled with impervious material. Work is under way on the concrete work for the Mirdan Canal outlet.

The entire project has been in the planning stages for nearly 30 years. It was authorized by Congress in 1972. Repayment and water service contracts were signed with the Twin Loups district in 1976. A blacktop road was built to the dam site on Calamus River above its junction with the North Loup in 1977.

District patrons gave strong support to the project in two 1979 elections.

Actual construction on the first phase of the project, preliminary excavation by Ames Construction Co. of Minneapolis, began a year ago.

Industrial Construction Corp. of Missoula, Mont., is excavating and constructing the dam.

What some area officials describe as probably the biggest construction project under way in the state was begun with comparatively little fanfare. It has been overshadowed by controversy over the proposed Norden Dam on the Niobrara River.

There is some lingering resentment here to the project, but organized opposition to the North Loup project all but ended in May 1981, when lawsuits were dismissed by U.S. District Judge Warren Urbom after out-of-court settlements ended about four years of litigation.

[From the Omaha World-Herald, June 27, 1982]

TOWNS GROW IN SHADOW OF DAM PROJECT

Burwell, Neb. — City officials here and at nearby Ord no longer talk about opposition to the North Loup irrigation project — the focus is on its benefits.

Project brochures cite University of Nebraska statistics that indicate every dollar of increased production resulting from irrigation generates nearly $8 of new business in the state.

Bill Pierson of the Bureau of Reclamation said there are some 110 construction workers on the site and the work force "could be close to 200 before the summer is out." More could be arriving by late summer when bids are let Aug. 31 for a road around the reservoir. Currently there are 52 bureau personnel in leased headquarters at Ord.

So far the biggest impact has been felt at Ord, which is 16 miles southeast of here. It has a population 2,661. Burwell has 1,382 residents.

"Most of the work force live at Ord. We don't have too much rental housing available," said Orval "Buck" Newbury, former Burwell mayor and operator of a bakery-cafe. "But it has made my cafe busier and I understand the beer joints get lots of business."

Newbury said Burwell stands to benefit the most after construction from the recreational bonus the new reservoir will bring. A bureau project estimated the new lake could draw 1,475 visitors a weekend or 109,000 a year.

The Burwell Fire Department is getting prepared. Underwater diving team training has begun.

The impact in Ord is already evident.

"Four guys came in from Las Vegas and told me they came because a construction map they'd read said Ord was 'one of the 10 hot spots in the nation,'" said Kerry Leggett, publisher of the Ord Quiz.

"I don't know if that is so, but I do know the start of construction has been a real shot in the arm. I'm sure offshoots of it have been the opening of a new Pump and Pantry store last Friday, the construction of a new 21-unit Airport Motel due to open July 1 and the about-to-open Y'all Come Back Saloon and the recently opened Family Emporium, an delicatessen and ice cream shop.

"Probably the most positive aspect is that many businesses that might have closed due to retirement of their owners or on account of the economy have sold to investors," Leggett said. "It certainly has made an impact on housing rentals, and our trailer parks are full."

He said he feels sure Ord is prepared for any problems an influx of workers bring. "We planned in the right direction."

Gene Baugh, Ord's superintendent of utilities, said: "It's been a godsend. We've had quite a bit of building and new businesses and in these times that's what you are looking for."

He estimated between 25 and 30 new homes have been built since definite project construction was assured and a couple of "apartment houses are flourishing and another is going in."

O'NEILL UNIT, NEBRASKA

STATEMENT OF EARL ROWLAND, PRESIDENT, MISSOURI RIVER BANK STABILIZATION ASSOCIATION, AND MEMBER, NATURE CONSERVANCY

Mr. ROWLAND. Mr. Chairman I am Earl Rowland from Newcastle, Nebr., president of the Missouri River Bank Stabilization Association and member of the Nature Conservancy, National Wildlife Federation and various other conservation and environmental groups, all organized to help preserve the unique and beautiful rivers and areas of our land. My wife and I have always had a deep and abiding love for the land, the wildlife, and the beauties of nature. We have always felt that we were God's stewards, keeping the land in trust for future generations, taking only what we need and hoping to leave it in better shape than we obtained it. Because of this love, we have maintained some sizeable timber and prairie areas at our own expense because of the bittersweet vines, dogwood, wild strawberries, and raspberries, along with native prairie grasses, wild flowers, and sumac which gives a colorful view the year around. We have people come to picnic in our pasture because of the wild flowers and have had several scout troops camp out to gain in their nature studies.

I am testifying this way so that I can go on record as saying as forcefully as I can that the O'Neill unit, with the Norden Dam as its principal structure, does no violence to our philosophy or to our feelings and hopes for the future of our State and region insofar as the environment is concerned. The project must be built, because the need for additional water storage and conservation is becoming increasingly acute. Therefore, I am very disappointed in the Nature Conservancy's opposition to the O'Neill unit and the Norden Dam. I have testified the two previous years before this distinguished subcommittee stating my objections to the things the Nature Conservancy has done to stop this very worthwhile and much-needed project. I am still a member of the Nature Conservancy because of their philosophy of preserving many areas of the United States, but I am definitely opposed to their stand on this project. The plan they propose this year titled, "The Niobrara Water Development Plan," sounds like they are grasping at straws to stall this project. I have not seen the details of the plan, but it sounds like an old plan studied by and rejected by the old Bureau of Reclamation years ago as not being feasible, which calls for the taking of water from wells in the Niobrara Valley.

I also am an irrigator using surface water and have been attending many meetings about water development and the future of water uses. I have seen many of the springs and small creeks in our area dry up because of the declining water table. That seems to be happening all over the United States as more water is being used to serve the needs of the general public.

I am now 62 years old and have farmed all my life, some of it in the Dust Bowl days of the 1930's. So I know what can happen without water. I think it is long past time for people in this country to wake up and realize there can be a severe shortage of water soon, and they should support efforts to preserve our water resources while there is still time.

If we wait too long, we can end up wondering where our water has gone. I have been in the area where the Norden Dam is to be built several times. I have seen the benefit-cost ratios. I have seen the acres to be irrigated, and I feel the benefits to be obtained far outweigh any losses, real or imagined, that are feared.

I want to go on record with this subcommittee squarely in support of continued funding for construction of the Norden Dam and completion of the O'Neill unit, of which the dam is a part.

Thank you very much.

Senator JOHNSTON. Thank you very much, Mr. Rowland.

The Ogallala aquifer continues to go down; that is not cyclical, that continues to go down each year.

Mr. ODGAARD. That is true Mr. Chairman, that is over the larger area in six States. Our wells tested in the State of Nebraska in the last year recovered about a foot because of the extreme wet conditions that we have had. The Ogallala aquifer subsequently in that six-State region is being depleted rapidly.

Senator JOHNSTON. Thank you very much, gentlemen.

Next, we have Mr. Ron Bishop, who is manager of the Central Platte Natural Resources District.

PRAIRIE BEND UNIT, NEBRASKA

STATEMENT OF RON BISHOP, MANAGER, CENTRAL PLATTE NATURAL RESOURCES DISTRICT

Mr. BISHOP. Mr. Chairman, my name is Ron Bishop, general manager for the Central Platte Natural Resources District and I am appearing before you today on behalf of the district and several other organizations out here in south-central Nebraska, as well as some individuals who are sitting at the table with me today.

The three fellows at the table, along with a couple of others in the audience, are appearing with me today from that general area. Many of these fellows have come on their own time, spending their own money, to let you know that they do support the project out there and we hope that the $250,000 for fiscal 1984, the feasibility study for the Big Bend water resources project could be approved.

We supplied you with copies of written testimony submitted by our group as well as several individuals and groups in support of that request including several of our State senators, a number of the State agencies, the department of water resources, the department of agriculture, and several others, as well as a number of local government agencies and local organizations out there. What the project is all about is addressing some of the serious water problems and needs that we have there in south-central Nebraska. We have a need for supplemental irrigation water, we have had severe ground water declines, along with ground water quality problems and flooding problems. There is also a need in the area for water to support wildlife habitat and for recreation.

Over the years, Senator Exxon and Senator Zorinsky from our State of Nebraska, along with Congresswoman Virginia Smith from Nebraska, have been working with our natural resources district, and a number of other organizations and individuals from that area who are getting a multipurpose water resources project developed and implemented to address some of those problems that we got.

We have already made a considerable amount of up-front progress for those efforts. We have carried out a number of studies and programs and data gathering efforts and those results are going to be helpful in the feasibility study. The local people have spent in excess of $400,000 in these efforts, trying to get us to the point where we are today. The State of Nebraska has also spent several hundred thousand dollars in those efforts that will be helpful in the feasibility study.

All of the data that we have gathered, all of the plans and studies and programs and research and activities that have been carried out and that others have carried out for us, indicate that a feasible multipurpose water resources project can be developed and it is feasible from an engineering and economic standpoint. So we are confident that a multipurpose project will prove to be feasible in the end and when developed will make a major contribution to the stability of the central Nebraska economy and the people of the region and there well-being, as well as enhance the fish and wildlife resources of the region.

To make such a program a reality we need your help. We need the help of the U.S. Bureau of Reclamation. We would hope you would all lend your strong advise and this committee's support of at least $250,000 for fiscal 1984 for the Bureau of Reclamation to work on that feasibility study that we need.

I thank you.

Senator JOHNSTON. Thank you very much, Mr. Bishop.

We certainly will look at your request in recognition of the problem you got from water there and hope we will be able to accommodate you.

[The statement follows:]

STATEMENT OF RON BISHOP, GENERAL MANAGER, CENTRAL PLATTE NATURAL RESOURCES DISTRICT

My name is Ron Bishop and I am General Manager for the Central Platte Natural Resources District and am appearing before you today on behalf of the District and other groups from the Central Platte Valley of Nebraska. Our Central Platte Natural Resources District covers part or all of the ten counties in south-central Nebraska that encompass the Platte River and its drainage areas along a 175 mile stretch extending from Gothenburg, Nebraska on the west to Columbus, Nebraska on the east.

A number of serious problems and critical needs relating to water exist within our Natural Resources District area. The economy of the area and the well-being of the people residing therein is dependent upon irrigated agriculture with the primary source of irrigation water being ground water.

The ground water levels, however, have been declining, causing an increase in pumping costs and an accompanying reduction in well production. The current ground water level declines of up to 25 feet are predicted to increase over the next 20 to 35 years to the point where thousands of irrigated acres will revert to dry-land without some kind of a supplemental supply project.

Additionally, each and every one of the over one-hundred thousand residents within our Natural Resources District gets their drinking water supply from ground water but ground water quality problems have developed in the eastern half of our District to the point where a number of municipalities have had to abandon wells because the nitrate levels exceeded the U.S. Public Health Service's published maximum safe level for human consumption.

The area is also subject to infrequent but severe flooding. The single flood event of June 1967 caused over $30,000,000.00 worth of damage in the eastern half of our Natural Resources District alone.

In addition to those three major problems there are also some needs related to water within our area.

Fist of all, there is a need to maintain adequate water supplies for the waterfowl, fish and wildlife that currently utilize the area. The Big Bend area of the Platte River Basin in Nebraska plays host to five to seven million migratory waterfowl each and every year.

There is also a need within our area for water based recreation facilities for our residents and the other residents of central Nebraska.

Senator James Exon, Senator Edward Zorinsky, Congresswoman Virginia Smith and our Natural Resources District along with several other organizations, groups, associations and individuals have been working for a number of years toward getting a water resources project implemented in the area that would resolve those problems and address those needs.

The project that is needed and envisioned by the study sponsors, which are our Natural Resources District, the Central Nebraska Conservation Association and the Twin Valley Conservation Association, is not a single purpose irrigation project but a comprehensive multi-purpose water resources project.

We have good reason to believe that one project could:

(1) supply supplemental irrigation water
(2) stabilize the declining ground water levels
(3) enhance ground water quality
(4) protect and enhance the quality of the municipal, small communities and rural domestic water supplies
(5) provide fish and wildlife habitat
(6) provide flood control and reduce flood damage, and
(7) provide public outdoor recreation for the residents of south-central Nebraska.

In addition, we feel the project can be designed so that it recognizes and addresses the need for maintaining flows in the Platte River at the critical times for such instream and downstream uses as:

(1) ground water recharge for irrigation and rural domestic supplies
(2) induced recharge for municipal water supplies
(3) migratory waterfowl
(4) maintenance of sub-irrigated crops
(5) maintenance of wet meadows and wetlands.
(6) water quality enhancement in surface and ground water, and
(7) fish and wildlife

While we have had a concentrated effort to get the U.S. Bureau of Reclamation authorized and funded to do a feasibility study of the project during those years we have not confined ourselves to just requests for the needed assistance.

We have already made a considerable amount of up-front progress toward making the project a reality. Numerous studies, programs and data gathering efforts have been conducted that will aid in the preparation of the feasibility study.

(1) Water Quality Studies. The water quality studies and programs that have already been conducted will be beneficial to the planning of the water resources project as it relates to identification of water quality problem areas, extent of the problem and effective methods of improving the ground water quality.

The local people, through our Central Platte Natural Resources District, have provided over $300,000.00 in cash toward those studies to-date, in addition to the hundreds of man-hours involved.

The funding by the State of Nebraska toward those studies has been approximately equal to the local contribution.

(2) Ground Water Model. Our Central Platte Natural Resources District and the Lower Loup Natural Resources District which borders us on the north, under contract with the U.S. Geological Survey, has developed a detailed ground water flow model of the ground water basin lying between the Loups and Platte River from the Lincoln-Dawson County line eastward, which encompasses the proposed project area.

The approximate cost of this ground water flow model is $120,000.00 with the cost being shared on an approximate 50-50 basis between U.S. Geological Survey and the districts.

The ground water model will be available and very helpful as a planning tool in evaluating the various alternatives available for the water resources project.

The Bureau of Reclamation would anticipate utilizing the model results in their more detailed planning efforts.

(3) Study of Engineering Alternatives. Our Natural Resources District contracted with the Denver, Colorado office of the engineering firm of CH2M Hill to look at various project alternatives available to the local people. One set of alternatives the firm evaluated was the physical or engineering alternatives available to address the water supply needs of the project area.

(4) Study of Financial Options. Another set of alternatives that was evaluated by the CH2M Hill firm were the options available to the local people for financing or assisting in the financing of the water resources program.

(5) Study of Institutional Options. The third set of alternatives evaluated by CH2M Hill for the District were the options available to the local people for establishing an organization to develop, manage and operate a water resources program.

The studies by the private firm of the engineering alternatives along with the study of the financial and institutional options was done under contract to, and paid for by, the Natural Resources District at a cost of approximately $35,000.00.

(6) Hydrologic and Water Resources Investigation. The engineering firm of Henningson, Durham and Richardson from Omaha, Nebraska conducted an investigation of the water availability in the Platte River and the preliminary water needs of the proposed project area. The investigation

and studies by Henningson, Durham and Richardson were done under contract to, and paid for by, local interests at a cost of approximately $23,000.00.

(7) U.S. Bureau of Reclamation's Appraisal Study. The Bureau made an evaluation of a supplemental water supply project for the eastern part of the proposed project area during their Upper Platte Basin Study.

The water budget studies indicate that ultimately some 35 to 40 percent of the arable land may be without a reliable water supply for irrigation purposes without a project.

Additional problems resulting in the predicted water table decline would include increased degradation of ground water quality and loss of wet meadow areas north of and adjacent to the Platte River.

In just the last two years, sixteen (16) public meetings have been conducted across the general area. Following many of these public meetings a questionnaire was distributed to all in attendance and they were asked to indicate, among other things, their support or opposition to a project as proposed and return the questionnaire unsigned at the end of the meetings. Of the several hundred questionnaires returned 94 percent indicated support, 3½ percent opposition and 2½ percent indicated no opinion.

Also within the past two years another forty (40) meetings have been conducted with individual organizations and associations including Livestock Feeders, Farmers Union, Chambers of Commerce, City Councils, Farm Bureaus, businessmen's clubs, county boards and various civic groups and special interest groups such as the Lion's, Kiwanis, Rotary, League of Women Voters, women's clubs, Audubon, Optimists, various engineering clubs and other organizations.

In addition to these 50 to 60 meetings, one of the sponsoring organizations (the Twin Valley Conservation Association) has been active in securing letters and petitions of support primarily from the area north and west of Kearney, Nebraska.

The petitions and letters indicated that support was running 90 percent or more in that area around Kearney.

As recent as March 1983 the Central Platte Natural Resources District surveyed the residents of eastern Dawson County, Buffalo County and Hall County to determine the level of public support and/or opposition to the proposed feasibility study. The survey was conducted by the use of a questionnaire mailed to all residents within and adjacent to the proposed study area. The returned questionnaire indicated strong support with the ratio of support to opposition being three to one across the entire area and even stronger support indicated from within the proposed surface area.

Our efforts during the last several years to secure authorization and funding for a feasibility study for a project have also received strong support from our State Senators from the area, as well as from the State of Nebraska.

Nebraska's Interagency Water Coordinating Committee, composed of the department heads of the various state agencies that deal with land and water resources, as well as the Nebraska Natural Resources Commission have taken a position supporting the feasibility study for the project.

All of the data from these plans, studies, programs, research and activities lead us to several conclusions:

(1) The water resources project is feasible from both an engineering and an economic viewpoint;

(2) There is sufficient unused flows in the Platte River that passes right through our Natural Resources District to provide the supplemental water needed;

(3) There is sufficient water available to recharge the ground water aquifer and stabilize the now declining ground water levels;

(4) That ground water recharge can also enhance ground water quality and protect the municipal, small community and rural domestic water supplies;

(5) There are good reservoir sites for the necessary storage available on Prairie Creek and on Wood River and its tributaries;

(6) Soils within the project area are highly suitable for irrigation with most of the land falling in the Soil Conservation Service's classification of "prime" agricultural land;

(7) Benefits from the project would more than cover the costs of building and operating the project;

(8) Large monetary, environmental and aesthetic benefits would occur from the development of fishing, wildlife and recreational aspects of the water and land use;

(9) Major flood control benefits could occur at little or no additional cost;

(10) Analyzing the project from an irrigation standpoint alone should have a favorable benefit:cost ratio of approximately 1.6 to 1;

(11) The Bureau of Reclamation indicated from their studies that a feasibility study of the project appears to be justified, both on the basis of need and on the basis of probable economic feasibility.

In summary, while we have major problems, there is a feasible solution. Feasible both from an engineering and an economic standpoint. The solution is a multi-purpose water resources project.

Our Natural Resources District Board, the other organizations from the area and people from our region are in support of, and committed to, this project.

We have the support of the State of Nebraska and we now have the necessary legislation that was introduced on the House side by our Congresswoman, Virginia Smith, as well as on the Senate side by Nebraska's Senators James Exon and Edward Zorinsky. It would authorize the Bureau of Reclamation to conduct feasibility studies of a water resources project in the Central Platte Valley.

We feel confident that the in-kind services that our Natural Resources District, as well as the various agencies of the State of Nebraska, will be able to provide toward the studies will be a major contribution in the effort and would, in all probability, be considered more than adequate to meet any possible need for state or local participation in this type of a program.

We want to be sure, however, that there is no question about our need, our desire, our support and our sincerity toward this project. Therefore, the Board of Directors of our Natural Resources District went on record at their regular board meeting on December 17, 1981, to commit, if needed, up to $200,000.00 over the next 3½ years for the feasibility study of a water resources project for Dawson, Buffalo and Hall Counties in Nebraska. That $200,000.00 is in addition to the $40,000.00 that our District already has budgeted and has on hand. All told, it would bring our funding commitment to a total of $240,000.00.

We are confident that a multi-purpose water resources project will prove to be feasible and, when developed, will make a major contribution to the stability of Central Nebraska's economy and to the people of the region and their well-being, as well as enhance the fish and wildlife resources.

To make such a program a reality we need your help and we need the help of the U.S. Bureau of Reclamation.

We would hope that you would all lend your strong individual and committee support to the Federal appropriation of at least $250,000.00 for Fiscal 1984 so that the Bureau of Reclamation can conduct the feasibility study that we so earnestly need.

Thank you.

STATEMENT OF GOV. ROBERT KERREY OF NEBRASKA

Dear Senator Hatfield:

As Director of the Department of Agriculture of the State of Nebraska, I wish to go on record in support of the Prairie Bend Unit Feasibility Study appropriation of $250,000 for fiscal year 1984.

Nebraska is one of the leading agricultural states in the United States. The high productivity of Nebraska's farms is largely due to the availability of irrigation water. If the additional water supplies that are available for development are utilized, Nebraska's farmers will be able to more effectively meet the increased needs for food and fiber which are sure to occur in the future.

Reclamation projects characteristically take many years to develop, therefore it would be highly advisable to complete the feasibility study of this project as soon as possible.

This project could provide water for surface irrigation to many fertile acres in central Nebraska. A major benefit to be derived from this project would be the potential stabilization of underground water supplied in the general area where the project would be built. Other traditional benefits of water projects would also be acquired with the completion of the Prairie Bend Unit.

I strongly urge your support for this feasibility study, which is the first step in the development of the Prairie Bend Unit.

STATEMENT OF STATE SENATOR RAY E. LUNDY OF NEBRASKA

Dear Senator Hatfield and Subcommittee Members:

I would like to be on record in support of the proposed $250,000.00 appropriation for the feasibility study of the Prairie Bend Unit Water Resources Project located in Dawson, Buffalo and Hall Counties of Nebraska.

Having served for many years as the City Manager for the City of Kearney which is located in the study area, I am well aware of the various water problems that face that region and the vital role that this project will play in protecting our region's, as well as the State's economy.

Senator J. James Exon, Senator Edward Zorinsky, Congresswoman Virginia Smith, my fellow State Senators from the region and I, along with the Natural Resources District and several other organizations, groups and individuals, have been working for a number of years toward getting a multi-purpose water resources project developed that would solve those problems and satisfy the needs.

Local, regional and state support for a feasibility study is very high and we are confident that such a study will show that a multi-purpose water resources project would not only prove to be feasible but will, when developed, be a major contributing factor to the stabilizing of the region and the fish and wildlife resources.

Your individual support and the support of your committee for the proposed appropriation of $250,000.00 for Fiscal 1984 for the Bureau of Reclamation study will be appreciated.

STATEMENT OF STATE SENATOR MARTIN F. KAHLE OF NEBRASKA

Dear Senator Hatfield and Subcommittee Members:

I am writing this letter to strongly support the feasibility study for the Prairie Bend Project along the north side of the Platte River in Dawson, Buffalo and Hall Counties.

I am a farmer, landowner and irrigator on the south side of the Platte River which is adjacent to this area. We have received the benefits of the Tri-County system and know what this kind of development can mean to the irrigators in the community. We, on the south side of the Platte River are one of the few areas where the water table has been rising; and this in spite of heavy pump irrigation. So we know that this type of project can and will work.

The Nebraska Legislature has several bills before them in this session concerning water legislation. One bill in particular is LB 198, which deals with the recharge of the aquifer. This will be a very important factor in determining whether projects such as this are going to be feasible. So I urge you to provide the $250,000 funding in order to make a feasibility study on this project. I think it is imperative that we conserve use of our water to the best advantage in this part of the nation where rainfall is scarce at times.

I do thank you for your consideration.

STATEMENT OF RODNEY K. GANGWISH, SHELTON, NEBR.

Mr. Chairman...Committee Members:

I would like to take this opportunity to submit written testimony in support of a feasibility study for the Prairie Bend Unit by the Bureau of Reclamation.

I am a landowner and live two and a quarter miles south, and two and a quarter miles west of Shelton, Nebraska, within the boundaries of the proposed Prairie Bend unit and am actively engaged in a farming partnership with my brother and my father.

I wish to convey to you a growing concern on the part of myself and my neighbors about the future of irrigated agriculture in our area.

We have ground water declines of 15 to 25 feet in the area with a significant decrease in well production. In most areas of the northern part of the Prairie Bend unit, the top water Pleistocene formation has been depleted. Some of these shallow wells in the northern reaches of the area that were yielding 700 to 800 gallons per minute 10 years ago now yield less than 150 gallons per minute. These shallow wells have been replaced with deep wells drilled into the Ogallala aquifer. The problem is that in some areas the Ogallala formation either does not exist or is not that productive and is yielding only 400 gallons per minute.

The land we farm that lies close to the Platte River (within two to four miles) also has no deep water Ogallala aquifer. The wells on this land have decreased up to 25 percent in output over the last 15 to 20 years.

This trend is alarming to me, and when we take into account the projections of ground water models and studies, such as the Platte River Basin Level B Study conducted by the Missouri River Basin Commission, our future for sustained irrigated agriculture is in serious jeopardy.

In addition, there are water quality problems. All of the residents and towns in the area get their drinking water from ground water. Several communities have problems because their nitrate content is above the Public Health Service's recommended maximum. I had to replace my well four years ago because it was yielding water with this same problem.

Flooding is another problem and, although not frequent, can cause a great deal of damage. There was in excess of $30,000,000.00 damage in the 1967 flood between Kearney and Columbus, much of which was in the proposed project area.

I feel the mood of the people in our rural area and in the surrounding communities of Grand Island and Kearney, have changed to the point that they are ready to face up to these challenges. We envision a project that would not only supplement irrigated water supply, stabilize ground water levels and enhance ground water quality, but would enhance municipal and rural domestic water supplies and provide fish and wildlife habitat, public outdoor recreation and flood control. One or more of these facets of the project would appeal to every citizen of our area in addition to stabilizing the economy of irrigated agriculture.

These are some of the reasons for the strong base of support the project has throughout the valley.

As you can see, we are not talking about a single purpose irrigation project, but a multi-purpose water resources project that would address all of these needs and more.

My neighbors and I support this type of project which will meet our needs for our future in irrigated agriculture. If we do not have some solutions to our challenges, we will be faced with turning irrigated acres back to dry land.

We in the Prairie Bend unit urge you to support this bill in Congress.

STATEMENT OF J. MICHAEL JESS, DIRECTOR, NEBRASKA DEPARTMENT OF WATER RESOURCES

Dear Senator Hatfield:

Past actions of the department have granted state approval of the Prairie Bend project. Widespread irrigation development has caused significant ground water declines in the area. This problem needs a solution before significant economic hardship occurs. The Prairie Bend project can accomplish this goal.

I am pleased to report on the project's status from the department's viewpoint. We urge that funding for a project feasibility study in the Prairie Bend area be approved.

STATEMENT OF RONALD G. HARGENS, CAIRO, NEBR.

Mr. Chairman....Committee Members:

I farm between Cairo and Wood River in the approximate center of the Prairie Bend area. I am 36 years old and have always lived in this area and have farmed for 18 years for myself.

In that time period I have seen the shallow wells go dry, being replaced by deep wells, tripling the horsepower requirements for irrigation water. On the land I farm there have been six irrigation wells abandoned for lack of production. Replacement wells were drilled at a greater depth to sustain irrigation.

According to the Bureau of Reclamation studies, and other studies done by private engineering firms, it is shown that in parts of the Prairie Bend area the aquifer life to sustain irrigation is 25 years or less.

In the same period the nitrate level of our house well has increased to 13 parts per million, three parts per million above the drinking water quality standard. Since we discovered this high level of nitrate in our drinking water we have been hauling bottled water for drinking.

To solve some of our problems, the Central Nebraska Conservation Association (Prairie Bend) was formed by a group of farmers and landowners from the Cairo, Wood River and Shelton area in western Hall and eastern Buffalo County in Nebraska. The purpose of the organization is to develop an irrigation and ground water recharge project to combat declining water tables and well production in much of the area.

To do this we filed a water right application in March of 1976 with the State of Nebraska to divert, store and use Platte River water. In October, 1976 we went to the Central Platte Natural Resources District, a local government subdivision, to ask them to assist us in securing a feasibility study. The Board of Directors unanimously decided to help us because of the existing and future water problems. Together we began seeking assistance from the Bureau of Reclamation to have them do an appraisal and feasibility study of the area.

The Upper Platte River Study has been completed by the federal government and the Prairie Bend area was part of the study. The study shows that there is a feasible project in the area. With the pre-feasibility study being completed we are ready for the complete feasibility study.

Our Nebraska delegation has introduced legislation in both the House and the Senate for the feasibility study. The Central Platte Natural Resources District has budgeted $240,000.00 to help fund the feasibility study and additional financial support is being offered from the Central Nebraska Conservation Association.

The project is being supported by several area groups and organizations: the Hall County Board of Supervisors, Buffalo County Board of Supervisors, Kearney Chamber of Commerce, Grand Island Chamber of Commerce, City of Grand Island, the towns of Cairo, Shelton and Wood River, Central Platte Natural Resources District, The Nebraska Natural Resources Commission, Nebraska Water Resources Association and several other groups and organizations.

An attitude survey poll was conducted by the Central Platte Natural Resources District, Central Nebraska Conservation Association, Whooping Crane Habitat Maintenance Trust and the Grand Island Chamber of Commerce.

The poll was taken in the Central Platte River Valley and showed the people were very much in favor of a water storage project in the area. Of those who had an opinion, 85 percent were in favor.

With this amount of State and local support, and the existing and future water problems of water quality and supply, we feel it is of utmost importance that a feasibility study be done of the area to determine what can be done to solve the problems.

Therefore, I am submitting this testimony to request your support of authorization of a feasibility study for the Prairie Bend Project by the Bureau of Reclamation.

STATEMENT OF DOUG THOMPSON, WOOD RIVER, NEBR.

Mr. Chairman....Committee Members:

I sincerely ask the Committee to seriously consider the request for the approval of funds for the feasibility study of the Prairie Bend Project in Central Nebraska.

This project is essential to the irrigated economy of the Hall/Buffalo County area. The area included in the project has been experiencing significant ground water declines over the past twenty years and the projections of declines for the coming years are disastrous.

As a farmer who has lived and farmed in the western Hall County area my entire life (as did my father and grandfather), I have seen our wells that at one time would pump 1,000 gallons per minute from 60 feet deep, decline to 500 gallons per minute at 200 feet deep. The replacement cost of these "deep" wells into the Ogallala aquifer is staggering (approximately $15,000.00 per well), not to mention the increased energy requirements which are approximately triple.

The Prairie Bend Project would not only surface irrigate a considerable portion of the area, but would provide us the much needed recharge of the underground aquifer for continued pump irrigation.

The area to be served by this project is not marginal land which would be developed for irrigation should the project be built; it is for practical purposes, all Class I prime farmland which has already been developed and irrigated over the last 40 years. This entire area of Nebraska operates on an irrigated economy, not only the farmers, but all businesses which are interrelated to them. Should the area be reverted to a dry land economy, the consequences would be disastrous.

Local support for the project is tremendous. The Central Nebraska Conservation Association (Prairie Bend) is operated strictly on donations from area farmers and businessmen, and has worked in conjunction with the Central Platte Natural Resources District on the project. In addition to the $240,000.00 committed to the project by Central Platte Natural Resources District, many in-kind services have been and will continue to be rendered by both groups.

My personal commitment to this project is only slightly evidenced by the fact that my own time and money were spent to be here today, my third trip to Washington, D.C. The futures of my family and neighbors will hinge upon this project; and therefore, I hope you will give it your most serious consideration.

STATEMENT OF JACK ODGAARD, EXECUTIVE VICE PRESIDENT, NEBRASKA WATER RESOURCES ASSOCIATION

Dear Mr. Chairman:

On behalf of the officers, directors, and more than 5,000 members represented in the Nebraska Water Resources Association, I am writing to express our support for the Prairie Bend Unit reclamation project. We specifically support the Administration's request for $300,000 in the fiscal 1984 budget for the feasibility study on the Prairie Bend Unit.

The Prairie Bend Unit would deliver irrigation water to an area in central Nebraska that is experiencing extensive declines in ground water levels. Ever since the demise of the previously authorized Nebraska Mid-State project, ground water levels have continued to decline in the area that would be served by the Prairie Bend project near Grand Island, Nebraska.

In addition to the increased costs for pumping by ground water irrigators, this situation has caused significant water quality problems in the area. The Prairie Bend project would provide direct irrigation water supplies to reduce farming costs, and would provide recharge of the underground reservoir in the area to stabilize the ground water table and help check the declining ground water quality.

We strongly support the Prairie Bend project and urge the committee to approve funding for the feasibility study in fiscal 1984 appropriations.

STATEMENT OF STATE SENATOR DONALD L. WAGNER OF NEBRASKA

Dear Senator Hatfield and Subcommittee Members:

My responsibilities with our State Legislative body on a number of key issues currently being debated prevents me from appearing in person in support of the proposed $250,000.00 appropriation for the Prairie Bend Unit feasibility study. I do, however, want you to know that I strongly support and am committed to that project and the important part it will play in protecting our region's economy.

We have large areas in eastern Dawson County, Buffalo County and Hall County where water tables are declining rapidly. Additionally, we have within those same areas ground water quality and flooding problems.

Senator James Exon, Senator Edward Zorinsky, Congresswoman Virginia Smith, I, and several of my fellow State Senators have been working for a number of years with the Natural Resources District and several other organizations, groups and individuals toward getting a multi-purpose water resources project for that area.

The local, the regional and the State support for a feasibility study is very high and I am confident that a project will prove to be feasible.

I would hope that you would lend your individual and committee support to the proposed appropriation of $250,000.00 for fiscal 1984 for the Bureau of Reclamation for the Prairie Bend Unit feasibility study.

STATEMENT OF STATE SENATOR LORAN SCHMIT OF NEBRASKA

Dear Mr. Chairman:

As Chairman of the Nebraska Unicameral's Public Works Committee, I am writing you to express my support for the funding requested in the fiscal 1984 budget for the feasibility study on the Prairie Bend Unit reclamation project in Nebraska.

The Prairie Bend project, proposed for central Nebraska, would be a multiple purpose water resources project with numerous benefits including flood control, municipal water supplies, ground water recharge, outdoor recreation, and fish and wildlife benefits. Most importantly, the project will provide direct delivery of irrigation water, supplemental water for irrigation, and recharge of underground water in a significant area of the state where ground water levels are declining.

Other projects in Nebraska have demonstrated the benefits to ground water recharge, and the recharge effects of the Prairie Bend project will have a significant impact on the agricultural economy of the area and on reducing reliance on imports of foreign oil.

While this project is not in my legislative district, I realize its importance to the State of Nebraska and to the future of agricultural production and plentiful food supplies for the United States and for our agricultural export program.

I strongly support the completion of the Prairie Bend feasibility study, and I respectfully urge your committee to approve the $250,000 for this study in the appropriations bill for fiscal 1984.

STATEMENT OF ORV QUALSETT, PRESIDENT, GRAND ISLAND (NEBR.) AREA CHAMBER OF COMMERCE

Dear Senator Hatfield:

This is to respectfully ask that you and your committee act favorably on the authorization and funding of a feasibility study by the Bureau of Reclamation for the Prairie Bend Project in south central Nebraska. We believe the study should include maintenance of the Grand Island municipal water supply, maintenance of the Platte River wildlife habitat and problems associated with rising water tables in portions of the area.

This project is important to the area in the recharging of declining ground water tables and declining production of many irrigation wells in the area. It would help stabilize the water table, thereby assuring a more permanent water supply for irrigation and preserving the economy of the area.

Thank you for your consideration.

STATEMENT OF LEE ORTON, EXECUTIVE DIRECTOR, NEBRASKA ASSOCIATION OF RESOURCES DISTRICTS

Dear Senator Hatfield:

This letter is written to support the funding for $250,000 for the feasibility studies for the Prairie Bend Unit, Pick Sloan Missouri River Basin Program.

That project we believe to be a viable alternative for further development of Nebraska's valuable surface water supplies. Nebraska is indeed blessed with a quantity of good land upon which to properly develop and maintain an agricultural base so important to America's future and world trade. Unfortunately, the water that is available to Nebraskans is not always in the right place at the right time to adequately and properly develop that land base. Projects like the Prairie Bend Unit can help Nebraska and America maintain its agricultural production capabilities far into the future.

We very much appreciate your continued support for the feasibility study efforts on this project proposal.

STATEMENT OF TWIN VALLEY CONSERVATION ASSOCIATION, INC.

Mr. Chairman....Committee Members:

The Board of Directors of the Twin Valley Conservation Association, Inc. wishes to express its thanks for the opportunity to submit this written testimony in support of the Prairie Bend feasibility study.

The Twin Valley Conservation Association Project is within the geographical area that will be studied by the Prairie Bend plan. We know from studies conducted by the Central Platte Natural Resources District that our underground water resources are in a state of decline. We are very concerned with these declines and the prospect that continued declines will result as deep well irrigation continues.

We also are very concerned with the increasing contamination of underground water supplies by nitrates. There are areas where the nitrate levels are well above the safe limits for human consumption.

We support the appropriation of $250,000.00 in fiscal year 1984 for the feasibility study of a water resources project located in Dawson, Buffalo and Hall Counties which is called the Prairie Bend Unit.

It is our sincere belief that the Platte River which flows through the project area provides a key to reversing the ground water declines and reducing the nitrate levels in the ground water. We feel a study can be conducted which will allow all concerned parties to work in harmony.

Thank you for your consideration.

STATEMENT OF STATE SENATOR HOWARD L. PETERSON OF NEBRASKA

Dear Senator Hatfield and Subcommittee Members:

I regret that prior commitments and key issues being debated before our State Legislative body prevented me from appearing in person in support of the proposed $250,000.00 appropriation for the feasibility study of the water resources project located in Dawson, Buffalo and Hall Counties in Nebraska which is so vital to our region.

I, nevertheless, wanted you to know of my strong support and commitment to that project and the vital part it will play in protecting our region's, as well as the State's, economy. We presently have large areas in eastern Dawson County, Buffalo County and Hall County where the water table is declining at a very rapid pace. In much of those same areas we have ground water quality and flooding problems, as well as a number of other water related problems and needs.

Senator James Exon, Senator Edward Zorinsky, Congresswoman Virginia Smith, I and my fellow State Senators from the region, along with the Natural Resources District and several other organizations, groups and individuals, have been working for a number of years toward getting a multi-purpose water resources project developed that would solve those problems and satisfy the needs.

Through the efforts of the local groups and in cooperation with other State and Federal agencies, a number of studies and investigations have already been carried out that will assist in the preparation of the feasibility study.

Additionally there will be a considerable amount of in-kind services that the various agencies of the State of Nebraska, as well as the local organizations and groups will be able to provide toward the study as it progresses. The Central Platte Natural Resources District has also notified me that they have, in addition, committed $240,000.00 to the feasibility study.

Local, regional and state support for a feasibility study is very high and we are confident that such a study will show that a multi-purpose water resources project would not only prove to be feasible but will, when developed, be a major contributing factor to the stabilizing of the region and the fish and wildlife resources.

I would ask your individual and committee support for the proposed appropriation of $250,000.00 for Fiscal 1984 to be used by the Bureau of Reclamation for the feasibility study of the water resources project in the Central Platte Valley.

NORTH LOUP PROJECT, NEBRASKA

Senator JOHNSTON. At this point, I would like to include in the record the prepared statement and supporting material of the Twin Loups Reclamation District regarding the North Loup project in Nebraska.

[The statements follow:]

JOINT STATEMENT OF HENRY G. LANGE, ORD, NEBR., AND DONALD E. KILDAY, PALMER, NEBR.

Mr. Chairman and Members of the Committee:

In the past, it has been our privilege to present this Statement to you in person; however, we believe that because of the costs of travel and the fact that you, as a Committee, have many people desiring to appear in person, the effectiveness of this Statement can be accomplished by presenting our Statement to you in this manner.

It is the purpose of this Statement to give you and your Committee a resume of the activities of the Board of Directors of the Twin Loups Reclamation District and the Board of Directors of The Twin Loups Irrigation District since our appearance before your Committee on March 30, 1982.

Through your confidence in us, you and your Committee have provided the necessary funds to have, as of this date, the construction of the North Loup Project completed to an estimated 17%. It is our understanding that the Contractors have now renewed their activities at the Calamus Dam and Reservoir.

According to Gary McCabe of Industrial Constructors Corporation, the construction company who is performing the major work on the Calamus Dam and Reservoir, his company had employed approximately 190 people during the 1982 construction season. Mr. McCabe expects his work force to grow to between 200 and 233 employees for the 1983 construction season.

The average weekly payroll for the his company was $51,000.00, plus an additional $15,000.00 for their sub-contractors, or a total average weekly payroll of $66,000.00 in 1982.

We are pleased to report that the Industrial Constructors Corporation has a policy of hiring as many local people as possible; however, it is understandable that there are certain skills which are not available locally. Therefore, this company has advertised for skilled operators and carpenters in Omaha, Denver, Kansas City and Rapid City newspapers.

The construction of the North Loup Project has kept the Ord-Burwell area from falling into the national pattern of high unemployment. The activitiy associated with the building of the Calamus Dam and the Canal System brings jobs not only for those individuals involved directly in the construction, but to others in the housing industry, retail business and other incidental businesses as well. It is interesting to note that the District Office of the Nebraska Unemployment Insurance Service, located in Grand Island, Nebraska, state that the Ord-Burwell Area is the one and only "bright spot" in the 22 county area of Central Nebraska.

Using July, 1982 unemployment figures furnished by the Nebraska Unemployment Insurance Service, these figures reveal that whereas the overall unemployment for Nebraska was 5.9%, the unemployment rate of Garfield County, with Burwell its County Seat, was 2.4%, and for Valley County, with Ord its County Seat, to be 2.6%.

The Board of Directors of both Districts have been diligent in assuming their responsibilities in the ultimate operation and maintenance of the Project.

On April 26, 1982, a Memorandum of Agreement was entered into between the Twin Loups Reclamation District and the Nebraska Game and Parks Commission for sharing in the operation, maintenance and replacement costs of fish and wildlife mitigation land and facilities of the North Loup Division. The costs are on a graduated scale to take into account the gradual development of irrigated lands; however, by the seventh year of the development of irrigated lands, and each succeeding year thereafter, the Twin Loups Reclamation District will share in the actual operation, maintenance and replacement costs at a rate of $20,000.00, or 25 percent of such costs, whichever is the lesser.

On June 4, 1976, the Twin Loups Reclamation District, as part of its repayment contract, agreed that it would meet the cost-sharing obligations for recreation enhancement if the State of Nebraska did not assume the responsibility of cost-sharing. Since that date, the Twin Loups Reclamation District and the Nebraska Game and Parks Commission have worked together in working out an arrangement whereby the Nebraska Game and Parks Commission would serve as the non-federal sponsor for the recreation enhancement of the North Loup Division under the provisions of Public Law 89-72. The total projected cost of the recreation enhancement facilities for the Calamus Reservoir, based on October, 1983 prices, is $1,800,000.00, of which the State of Nebraska, through the Nebraska Game and Parks Commission, would share in 50% of the cost, namely, $540,000.00.

Construction of the recreation facilities will be over a three year period, starting with the Bureau of Reclamation's 1983-84 Budget Cycle. The first year funding level request is $125,000.00 from the State of Nebraska with each of the two years leveling of funding from the State being $207,500.00. This level of funding would be contingent on future appropriations. The Federal Government will be expending a like amount each of the years. This level of funding, starting in the Bureau of Reclamation 1983-84 Budget Year, is necessary to attain final designs of the facilities and allow for construction of boat launching facilities prior to the Bureau of Reclamation initiating filling of the Calamus Reservoir in the Fall of 1984.

Since the State of Nebraska has not contributed any funds in the construction of the North Loup Project, we are hopeful that the Nebraska State Legislature and Governor Robert Kerrey will see fit in 1983 to provide the required sum of $125,000.00. It is our understanding that with this commitment by the State of Nebraska, the Nebraska Game and Parks Commission can enter into a final agreement with the Bureau of Reclamation for cost sharing design, and construction of the recreation facilities for the North Loup Division.

As the construction of the North Loup Project became a reality, many of our potential water users indicated a strong desire to have additional lands owned by them to receive irrigation service upon the completion of the Project.

Since the Year 1981, Pump Contracts between The Twin Loups Irrigation District and landowners have been signed which provide that additional lands would be served from the irrigation works of The Twin Loups Irrigation District and the Twin Loups Reclamation District. By reason of the many Pump Contracts signed, the total acreage to be served by the irrigation works would have been approximately 57,286 acres, including Petitions which have been filed with the Board of Directors of The Twin Loups Irrigation District. Since our authorized acreage to be served by the constructed irrigation works is 53,000 acres, it was necessary to bring the acreage within this authorization. Through the combined efforts of representatives of the Bureau of Reclamation, the Directors of the Twin Loups Reclamation District, and the Directors of The Twin Loups Irrigation District, it was possible to determine that because of high delivery costs and because some of the tracts were isolated, it was in the interests of both the Twin Loups

Reclamation District and The Twin Loups Irrigation District that service be provided to the authorized acreage of 53,000 acres. Action on the irrigable acreage was accomplished at a joint meeting of our two Boards on January 26, 1983. Then on March 3, 1983, the Board of Directors of The Twin Loups Irrigation District finalized the 53,000 authorized acreage by granting the request of approximately fifty landowners to bring into the Irrigation District these additional acresages.

During the Year 1982, the Boards of Directors of the Reclamation District and the Irrigation District concluded it was timely to select a site for the Project's Headquarters. Through the cooperation and assistance of representatives from the town of Scotia, Nebraska, the town of Scotia, at no cost to the Districts, will provide a tract of land just west of Scotia for the Districts' Headquarters. The site is centrally located and we, as Directors, are pleased to be able to proceed with plans for construction of the necessary buildings and yards to efficiently operate and maintain the irrigation works.

As Directors of the Twin Loups Reclamation District and The Twin Loups Irrigation District, we wish to commend the personnel making up the Bureau of Reclamation, Nebraska-Kansas Project Office in Grand Island, Nebraska and the Bureau of Reclamation North Loup Construction Office in Ord, Nebraska, for the manner in which they have progressed with the planning and for the orderly construction of our Project.

The Land Classification Section of the Bureau of Reclamation has done a remarkable job in obtaining the right-of-way needed. The majority of the land acquisition has been obtained through friendly and considerate negotiation by the Land Acquisition Section and the individual land owners. The number of condemnation actions or proceedings is minimal as compared to the number of land acquisitions obtained through negotiations.

Through the revenues obtained by the levying of ad voleum taxes by the Twin Loups Reclamation District and by the levying of assessment and toll charges by The Twin Loups Irrigation District, the Districts will be in a position to meet their financial obligations for the operation and maintenance of the Project, as well as the Districts obligations to the United States of America, as provided in their respective repayment contracts.

In summary then, we are proud to have been able to give you, Mr. Chairman, and your Committee this progress report and to have accompanied with this Statement more than 235 letters of support. These letters of support have been received from Governor Kerrey, our State Senators, Department Heads of the State of Nebraska, State and local business people, and more than 175 farmers and other interested persons who will be receiving the benefits of the North Loup Project unpon its completion.

We, as Directors of the Twin Loups Reclamation District and The Twin Loups Irrigation District, are well aware that the imput of the Federal Government is vital to the completion of the North Loup Project. The investment in the construction of the North Loup Project will be repaid, produce positive economic impact, and conserve our natural water resources which are so important, not only to the State of Nebraska, but to the Nation as a whole. And finally, upon completion of the Calamus Dam and Reservoir, residents of the State of Nebraska and Neighboring States will be provided with one of the finest recreation areas, not only in Nebraska, but in Mid-America.

We again express our gratitude to you and your Committee's past support of the North Loup Project, and now your continued support.

North Loup Division, Pick-Sloan Missouri Basin Program

List of Statements Supporting North Loup Division

Statements on Behalf of:

1. Robert Kerrey, Governor, State of Nebraska
2. Donald L. Wagner, Senator, District 41
3. Howard Lamb, Senator, District 43
4. Loran Schmit, Senator, District 23, and Chairman, Public Works Committee
5. R. Wiley Remmers, Senator, District 1
6. Steve Wiitala, Senator, District 31
7. Robert L. Clark, Senator, District 47
8. Calvin F. Carsten, Senator, District 2
9. Martin F. Kahle, Senator, District 37
10. James E. Pappas, Senator, District 42
11. Lee Rupp, Senator, District 22
12. John W. DeCamp, Senator, District 40
13. Harry B. Chronister, Senator, District 18
14. William E. Nichol, Senator, District 48
15. Ray E. Lundy, Senator, District 36
16. Elroy M. Hefner, Senator, District 19
17. Harold F. Sieck, Senator, District 24
18. J. Michael Jess, Director, State of Nebraska, Department of Water Resources
19. Robert L. Raun, Director, State of Nebraska, Department of Agriculture
20. Dayle E. Williamson, Executive Secretary, State of Nebraska, Natural Resources Commission
21. Eugene T. Mahoney, Director, Nebraska Game and Parks Commission
22. Roy G. Arnold, Vice Chancellor, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln
23. Lee Orton, Executive Director, Nebraska Association of Resources Districts
24. Robert B. Crosby, Attorney at Law, Lincoln, Nebraska
25. Jack Odgaard, Executive Vice President, Nebraska Water Resources Association
26. Max E. Kiburz, General Manager, Loup Power District
27. Kenneth Collins, Chairman, Valley County Board of Supervisors
28. R. M. Cargill, Manager, Ord Chamber of Commerce
29. Harold D. Christensen, Executive Vice President, Nebraska State Bank
30. Donald E. Blaha, President, First National Bank
31. Clarence H. Sixel, President, State Bank of Scotia
32. Robert J. Sixel, Executive Vice-President, State Bank of Scotia
33. Millard D. Vlach, Chairman of the Board, Village of Scotia
34. Orville Jelinek, Mayor, City of St. Paul, Nebraska
35. Stanley J. Edwards, President, Citizens Bank & Trust Company in St. Paul
36. Pamela A. Shaughnessy, Secretary, St. Paul Area Chamber of Commerce
37. E. J. Thayer, President, Commercial National Bank & Trust Company
38. Roy L. Olsen, Manager, Howard Greeley Rural Public Power District
39. LaVerne P. Jacobsen, President, The Loup Basin Reclamation District
40. Rich Howe, Manager, Loup Valley Elevators
41. Orv Qualsett, President, Grand Island Area Chamber of Commerce
42. Keith Davis, President, Loup Basin Surface Water Development Association
43. Keith Davis, Secretary-Treasurer, The Loup Basin Reclamation District
44. Vance Anderson
45. J. Marvin Weems, Attorney at Law, Ord, Nebraska

46. Donald E. Kilday, President, North Loup Irrigation District
47. J. A. Dinsdale, Dinsdale Brothers, Inc., Palmer, Nebraska
48. Dennis Rasmussen, Legislative Consultant.
49. William Hartmann, Exeutive Director, Nebraska Land Improvement Contractors Association
50. Harry Lustgarten, Jr., Chairman, Nebraska Railroad Association
51. Henry G. Lange, President, The Twin Loups Reclamation District
52. Donald E. Kilday, Vice-President, The Twin Loups Reclamation District
53. Donald E. Hughes, Secretary-Treasurer, The Twin Loups Reclamation District
54. John Potrzeba, Director, The Twin Loups Reclamation District
55. Louie M. Cording, Director, The Twin Loups Reclamation District
56. Carl F. Anderson, Director, The Twin Loups Reclamation District
57. Richard Spilinek, Director, The Twin Loups Reclamation District
58. Merlyn Schudel, Assessor, The Twin Loups Irrigation District
59. Progress Photographs
60. Donald P. Kilday
61. Rudolph John
62. Mark V. Sonderup
63. Vern R. Sonderup
64. Larry R. Forbes
65. Frank Santin
66. Robert Forbes
67. Donald Vancura
68. Geo. Zurek
69. John Potrzeba
70. Wm. Vancura
71. Albert Zuege, Jr.
72. Tony Gregoski
73. Bryce J. Pearson
74. Mrs. Chester Wells
75. Robert Rasmussen
76. Lester Wells
77. Clifford Pedersen
78. Carl Soneson
79. Ken Bennett
80. Ray Nowak
81. Ralph Spilinek
82. Ralph Spilinek, d/b/a Spilinek Fertilizer Service
83. Nancy L. Wiley
84. Jeanine E. Soneson
85. Joe Coufal
86. Mrs. Joe Coufal
87. Derrell G. Ingram
88. Stanley Powers
89. C. D. Cummins
90. Gordon Wiemers
91. Mrs. Jean Smith
92. Ruth Klimek
93. Frank J. Zadina
94. Donn Russell
95. Nola M. Miller
96. Alfred Schubert
97. Burton Paulsen
98. Mrs. Deb Rasmussen
99. Harold Berst
100. Walt Hanisch
101. Ernest F. Anderson, Jr.
102. Ernest Anderson
103. Dean G. Thede
104. Gary L. Justesen
105. Pat Wieck

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106. Randall Faaborg
107. Thomas R. Mortimer
108. Jim E. Sidel
109. Russell Coufal
110. Karen E. Mortimer
111. Richard D. Rhoads
112. Jeffrey J. Wichmann
113. Gilbert Wegner
114. Ken Pflepsen
115. Don Schmidt
116. Dorothy Krance
117. Joseph C. Pedersen
118. Dallas Wegner
119. Doug Wegner
120. Dennis Jonak
121. Melvin D. Miller
122. Shirley A. Brandt
123. Eugene Vodehnal
124. Donald O. Axthelm
125. Roy M. Marshall
126. Tom Frazer
127. Maynard Schudel
128. Lawrence G. Roy
129. Millard Vlach
130. Ray L. VanSlyke
131. Nicholas G. Blement
132. George P. Urich
133. Wilbur Fuss
134. Charles I. Goodrich
135. Daniel Roy
136. Herman Pokorny
137. Leonard Sich
138. Merlyn Williams
139. Thomas Holt
140. Harold Placke
141. Victor Wegner
142. Carroll Thomas
143. Dean J. Rasmussen
144. Edward W. Hudson
145. Clarence J. Fox
146. Michael Fox
147. Ronald E. Fox
148. August C. Kriewald
149. Gordon Kriewald
150. Wayne Whitefoot
151. Scotia Welding, by Travie Henry
152. Frank E. Bruha
153. Maurice Johnson
154. Doug Hughes
155. Allen Keep
156. Otto F. Gebhardt
157. Anton Schmidt
158. Clarence Polski
159. Richard Spilinek
160. Roland Spilinek
161. Daniel C. Wells
162. Lynn Jacobsen
163. Clinton A. Wells
164. Robert Forbes
165. Robert J. Rasmussen
166. Maybelle Rayne
167. Dale Rasmussen
168. Alex Kulwicki

169. Henry G. Lange
170. Geo. B. Clement
171. Gary L. Garnick
172. C. F. Klimek
173. Clark A. Hervert
174. Alfred Burson
175. Clark Weakbach
176. Marvin E. Witherwax
177. Lloyd Needham
178. Cox Well Drilling, by Darrel L. Cox
179. D & H Service, by Allen DeNoyer
180. Laverne Jess and Laurine Jess
181. Leonard Murphy and Irene B. Murphy
182. Esther Fillinger
183. Donald E. Hughes
184. David L. Wentz
185. Rick D. Vlach
186. Lester L. Jacobsen
187. Anton F. Oeltjen
188. Donald G. Deininger
189. Don Novotny
190. Jerry Polski
191. Pete J. Zymtek
192. Bernard R. Camp, Manager, Farmers Grain & Supply Co.
193. Mike Nowak
194. Paul G. Julesgard
195. Alfred Novotny
196. Diane Lassen
197. Leonard Wells
198. Richard Vogeler
199. Garrell Dimmitt
200. Donald Thompson
201. Donna L. Moravec
202. Ronald W. Wells
203. Greg Keep
204. Harland Wells
205. Rodney Wells
206. Zeta M. Layher, Vice President and Cashier, Elba State Bank
207. Jurzenski Service, by Hank M. Jurzenski
208. Zigmond Palacz
209. Darell D. Conway
210. Darrell Lewandowski
211. Michael G. Potter
212. Errol Wells
213. Clarence F. Obermeier
214. John F. Mayne
215. James E. Nelson, Manager, St. Paul Co-op Grain Association
216. Tim Wells
217. John Herbig
218. Tracy Herbig
219. Esther Herbig
220. Warren Townsend
221. Darold Townsend
222. Glenn E. Rasmussen
223. Mrs. Harold Rasmussen
224. Harold Rasmussen
225. Joe Payne
226. Larry Larkowski
227. Wm. Beran, Jr.
228. Johnnie A. Valasek
229. Jerry Rajewich
230. Eugene Novotny, President, Novotny Farms, Inc.
231. Alma Rajewich
232. Edward E. Bruha
233. Emma Bruha
234. Vernon J. Potrzeba
235. James L. Vlach
236. Walter J. Smith
237. Michael J. Schudel

STATEMENT OF CLARENCE H. SIXEL, PRESIDENT, STATE BANK OF SCOTIE, NEBR.

Dear Senator Hatfield:

I am writing to voice my support for the North Loup Project, The immediate visible economic effects is seen all throughout the construction area which certainly is a tremendous boost for the local economy, The real impact is very hard to track in dollars and cents.

The equipment, fuel, supplies, materials, and so forth required in the construction of the North Loup Project bring not only economic benefits to our area, but they also can produce much needed benefits to the area where such supplies originated.

The North Loup Project is a labor intensive project in relation to the total dollars spent. Labor dollars are for the most part spent in our local area, all of which contributes to a stabilized economy not only in our area, but throughout the entire State of Nebraska and the Nation as a whole.

I moved into this trade area in 1948, and am now realizing what a tremendous change this is going to make in our North Loup area.

I am convinced that you and your Committee's continued support for the funding of the North Loup Project will provide lasting economic benefits to Central Nebraska, and at the same time the North Loup Project will provide job opportunities for people in many area of the State of Nebraska, and for the whole Nation.

So, I wish to take this opportunity to state that all of us need you and your Committee's continued support of the appropriation of $32,420,000.00 for Fiscal Year 1984.

I thank you and your Committee for this continued support and I remain

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STATEMENT OF KENNETH COLLINS, CHAIRMAN, VALLEY COUNTY (NEBR.) BOARD OF SUPERVISORS

Dear Senator Hatfield:

The construction of the North Loup Project has been a great economic boost to not only the business people of Ord and Burwell, but to all areas.

This favorable economic impact has come during a time when other areas have experienced reduced activity.

I am confident that most of the economic activity can be attributed to the construction of the North Loup Project. I am happy to state that new businesses have already been built in our area with several others in the planning stages.

The tremendous long range economic effects I believe is much greater than had been planned in the early days of the planning and actual construction of the North Loup Project.

Finally, it is through you and your Committee's assistance that such activity has become a reality. Accordingly, I wish to take this opportunity to state that I, together with the other businessmen in the area, urge your Committee's continued support of the appropriation of $32,420,000.00 for Fiscal Year 1984 in order that the construction of the North Loup Project can be completed on schedule.

Thank you again for you and your Committee's continued support and I remain

STATEMENT OF ROBERT L. RAUN, DIRECTOR, NEBRASKA DEPARTMENT OF AGRICULTURE

Dear Senator Hatfield:

As your subcommittee considers the continuation of support for the North Loup Division Project of the Bureau of Reclamation, I wish to express my enthusiastic endorsement of the amount that has been recommended for continued construction activity during fiscal year 1984.

The construction that is now underway must be continued so that we can make better use of our water resources. Nebraska's economy is based on agriculture, and agriculture in Nebraska depends in great measure on the availability of a continuing supply of irrigation water.

Completion of the North Loup project will provide that dependable supply for a significant amount of farmland in central Nebraska. As future needs for food and fiber inevitably increase, the area served by this project will be well prepared to help fill that need.

I also want to express our gratitude for your past support of this excellent Reclamation Project.

STATEMENT OF STATE SENATOR LORAN SCHMIT OF NEBRASKA

Dear Mr. Chairman:

As Chairman of the Nebraska Unicameral's Public Works Committee, and as a lifetime farmer in Nebraska, I am writing in support of the appropriations for the North Loup Division reclamation project, contained in the budget request for Fiscal 1984.

You, your committee, and the Congress have steadfastly supported construction and funding for the North Loup project, for which I and many other Nebraskans are most grateful. In this time of high unemployment, I thought you might be interested in knowing some of the additional benefits that have occurred in the past two years in the work associated with the construction of the North Loup project.

With the exception of the depressed grain market and prices, a large area of central Nebraska is virtually isolated from the current recession because of the construction of the North Loup project. Hundreds of jobs are being provided in the direct construction, and hundreds more are provided through services and associated jobs.

The communities in the project area are experiencing significant housing construction, new and expanded retail and service businesses, and other benefits. I am sure the people from the project area will provide you with more information about these benefits associated with construction of the North Loup project.

The continued construction of the North Loup project will provide hundreds of jobs for the next several years, and I urge you and your committee to approve the $32,420,000 in the budget for Fiscal 1984 appropriations.

STATEMENT OF ROY G. ARNOLD, VICE CHANCELLOR, UNIVERSITY OF NEBRASKA LINCOLN

Dear Senator Hatfield:

I understand that your committee will soon be conducting hearings for the Water and Power Resources Service, North Loup Project in Nebraska.

The development and wise use of the state's water resources are vital to the economic and social well-being of the people of Nebraska. Nebraska's growth in irrigated acres during the past 15 years has been phenomenal, increasing from 2.9 million acres in 1965 to over 7 million acres at this time.

We need to make effective and efficient use of both our surface and ground water resources in Nebraska. Our faculty in the Institute of Agriculture and Natural Resources presently have several research and extension projects in progress aimed at improving our irrigation efficiency. Currently, nearly six of every seven acres irrigated in Nebraska are dependent upon wells using ground water, with only one of every seven acres irrigated from surface water sources. We need to find ways to use off-season high flows in our streams and rivers through water storage systems for irrigation, for ground water recharge, and for recreation and wildlife habitat improvement.

The University of Nebraska does not have an official position on this project. However, it would appear that the proposed project would enhance the further development of Nebraska's water resources and contribute to the state's economy.

STATEMENT OF LAVERNE P. JACOBSEN, PRESIDENT, LOUP BASIN RECLAMATION DISTRICT

Dear Senator Hatfield:

As President of the Loup Basin Reclamation District, I am pleased to write this letter of support for the continued construction program for the North Loup Division, Nebraska. The construction of the North Loup Project has kept the Ord - Burwell area from falling into a national pattern of high unemployment.

The equipment, fuel, supplies, materials, and so forth required in the construction of the North Loup Project bring not only economic benefits to our area, but they also can produce much needed benefits to the area where such supplies originated.

The North Loup Project is a labor intensive project in relation to the total dollars spent. Labor dollars are for the most part spent in our local area, all of which contributes to a stabilized economy not only in our area, but throughout the entire State of Nebraska and the Nation as a whole.

I am convinced that you and your Committee's continued support for the funding of the North Loup Project will provide lasting economic benefits to Central Nebraska, and at the same time the North Loup Project will provide job opportunities for people in many areas of the State of Nebraska, and for the whole Nation.

So, I wish to take this opportunity to state that all of us need you and your Committee's continued support of the appropriation of $32,420,000.00 for Fiscal Year 1984.

I thank you and your Committee for this continued support and I remain

STATEMENT OF DONALD P. KILDAY, PALMER, NEBR.

Dear Senator Hatfield:

I am a farmer residing in the Fullerton area. I, together with many other farmers in our area, share the same view that having a reliable water supply will stabilize the agricultural community of not only the Fullerton area, but will also stabilize the economy not only in the Loup Valley area, but throughout the State of Nebraska and the Nation as a whole.

Your Committee's support in the past which has provided the necessary funding for the North Loup Project has set in motion the means for which we in the Loup Valley can have a reliable water supply. It is our understanding the appropriation needed for the continued construction of the North Loup Project is $32,420,000.00 for Fiscal Year 1984.

So, I wish to take this opportunity to state that all of us need your Committee's continued support for the appropriation of $32,420,000.00 for Fiscal Year 1984.

I thank you and your Committee for this continued support and I remain

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STATEMENT OF EUGENE T. MAHONEY, DIRECTOR, NEBRASKA GAME AND PARKS COMMISSION

Dear Chairman Hatfield:

I am writing in behalf of the Nebraska Game and Parks Commission which has agreed to serve as the non-federal sponsor for fish, wildlife and recreation enhancement of the North Loup Division, Nebraska, (Calamus Reservoir), under the provisions of Public Law 89-72, Federal Water Project Recreation Act.

This Commission, therefore, would become the non-federal entity to cost-share with the Federal Bureau of Reclamation for the design, construction, and operation and maintenance of the recreation facilities at Calamus Reservoir based upon the appropriation of general funds by the Nebraska Unicameral.

The Nebraska Legislative Appropriations Committee has recommended the sum of $125,000.00 general fund monies as first year cost-share of recreation enhancement facilities for Calamus Reservoir. This level of funding, starting in our fiscal 1983-84 budget year, will allow final design of the recreation facilities and allow for construction of boat launching facilities prior to the Bureau of Reclamation filling of Calamus Reservoir in the fall of 1984.

The Nebraska Game and Parks Commission requests the Senate Subcommittee's continued support for the North Loup Division Project by providing funding to allow for completion of the recreation enhancement facilities.

Thank you in behalf of the Commission for your consideration of this request.

STATEMENT OF J. MICHAEL JESS, DIRECTOR NEBRASKA DEPARTMENT OF WATER RESOURCES

Dear Senator Hatfield:

Past department action has granted State approval for construction of the North Loup Unit. Now under construction, the project is an enhancement locally and will soon yield benefits on a regional and national scale.

I visited the construction site in October 1982. In my judgment the project is being pursued with diligence. Barring any unforeseen delays, it should become operational soon.

The Engineering Branch of this department has examined the plans for the Calamus Dam and found them technically satisfactory. I therefore have approved the plans and authorized construction of the dam.

I am pleased to report on the status of the North Loup Unit from the viewpoint of this department. Continued funding of the project is urged.

STATEMENT OF MERLYN SCHUDEL, ASSESSOR, TWIN LOUPS IRRIGATION DISTRICT

Dear Senator Hatfield:

As one of the Directors of The Twin Loups Irrigation District, I wish to take this opportunity to express to you and your Committee my thanks for your faith in the North Loup Project by your support for the continued funding of our Project.

Just recently we as Directors brought the acreage in The Twin Loups Irrigation District to conform with the authorized acreage of 53,000 acres.

This action is only one of the many that will be required to fulfill our long sought effort to make our North Loup Project a reality.

I am confident you and your Committee's continued support for the appropriation of $32,420,000.00 for Fiscal Year 1984 will keep the construction of our Project on schedule and I remain

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STATEMENT OF DAYLE E. WILLIAMSON, EXECUTIVE SECRETARY, NEBRASKA NATURAL RESOURCES COMMISSION

Dear Mr. Hatfield:

The Nebraska Natural Resources Commission has reviewed the North Loup project budget request for fiscal year 1984 and finds the $32,420,000.00 requested to be very reasonable and appropriate. We urge your approval of this amount as requested by the Bureau of Reclamation.

Construction is proceeding on schedule on this project which is so vital to the State of Nebraska. We look forward to continued progress and initial water delivery in 1986.

You and members of your committee are to be commended for your efforts in assuring that the plans for this project are now becoming a reality.

STATEMENT OF PAT WIECK, NEBRASKA

Dear Senator Hatfield:

I am writing to voice my support for the North Loup Project. The immediate visible economic effects is seen all throughout the the construction area which certainly is a tremendous boost for the local economy. The real impact is very hard to track in dollars and cents.

The equipment, fuel, supplies, materials, and so forth required in the construction of the North Loup Project bring not only economic benefits to our area, but they also can produce much needed benefits to the area where such supplies originated.

The North Loup Project is a labor intensive project in relation to the total dollars spent. Labor dollars are for the most part spent in our local area, all of which contributes to a stabilized economy not only in our area, but throughout the entire State of Nebraska and the Nation as a whole.

I am convinced that you and your Committee's continued support for the funding of the North Loup Project will provide lasting economic benefits to Central Nebraska, and at the same time the North Loup Project will provide job opportunities for people in many areas of the State of Nebraska, and for the whole Nation.

So, I wish to take this opportunity to state that all of us need you and your Committee's continued support of the appropriation of $32,420,000.00 for Fiscal Year 1984.

I thank you and your Committee for this continued support and I remain

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STATEMENT OF R. M. CARGILL, MANAGER, ORD (NEBR.) CHAMBER OF COMMERCE

Dear Mr. Hatfield;

We wish to convey to you our support for the North Loup Project, which continues to boost our local economy and provide jobs for those who might otherwise be unemployed due to the sluggish economy.

We are very fortunate to have this project going at this time. Ord has been given an economic reprieve from the depressed economy when other areas have experienced reduced activity. I am happy to state that new businesses have already been opened in our area with several others in the planning stages.

I am convinced that you and your Committee's continued support for the funding of the North Loup Project will provide tremendous long range economic benefits much greater than originally predicted, not only for Nebraska but for the nation as a whole.

Accordingly, I wish to take this opportunity to state that the Ord Chamber of Commerce urges your Committee's continued support of the appropriation of $32,420,000.00 for Fiscal Year 1984 in order that the construction of the North Loup Project can be completed on schedule.

I thank you and your Committee for this continued support and remain

STATEMENT OF STATE SENATOR WILLIAM E. NICHOL OF NEBRASKA, SPEAKER OF THE LEGISLATURE

Dear Senator Hatfield:

As you begin hearings on major water projects I would like to join my fellow Nebraskans in asking for favorable consideration of continued funding for the North Loup Division Project. The recommended level for this project is $32,420,000.

Construction on this project is well under way, and is providing many jobs in the construction industry in Nebraska and a much needed shot in the arm for the local and state economy. The North Loup Division Project will be a means for conserving and wisely managing our precious water resources and provide for the needs of our agriculture-based economy far into the future.

Thank you for your past support, it has been extremely important to our state. It is hoped that the Committee will act with favor on the continued funding for this project.

STATEMENT OF STATE SENATOR R. WILEY REMMERS OF NEBRASKA

Dear Senator Hatfield:

As you probably realize, agriculture is the most important industry in Nebraska. Therefore, it is extremely important for Nebraska to build projects designed to conserve water resources for the future of our agricultural industry. I believe the North Loup Division Project would be a positive step toward preserving Nebraska's precious water resources.

As a State Senator, I understand the tremendous pressures and headaches involved in formulating a budget. I appreciate your work in this area and your past funding support for the North Loup Project. I respectively request you to support continued funding for this project.

STATEMENT OF STATE SENATOR DONALD L. WAGNER OF NEBRASKA

Dear Senator Hatfield:

The North Loup Division Project is located in my home area and I have had a first-hand opportunity to see the benefits of the Project and talk with the people the project will affect the most.

The primary purpose of the North Loup Project is water conservation. This goal becomes increasingly important as we work to reverse the recent trend of decreasing water supplies. An added benefit of this project will be the recharge of groundwater supplies, complementing the surface storage provided by the Project.

The North Loup Project brings needed jobs to workers from all over Nebraska and from surrounding states as well. The Project is also stimulating the local economy, creating long-term economic benefits, such as housing development and new retail establishments.

Finally, the recreational opportunities which will become available through the North Loup Project can be considered an added bonus. The recreational facilities which will be associated with the Project are not an afterthought but have been part of the planning of the Project from its inception.

Local and statewide support for the North Loup Division Project is very strong. I would like to thank the Committee for the past appropriations the Project has recieved, and I ask that you support the recommended appropriation for fiscal year 1984.

STATEMENT OF MILLARD D. VLACH, CHAIRMAN OF THE BOARD, SCOTIA, NEBR.

Dear Senator Hatfield:

Progress of the Calamus Dam and Reservoir has brought considerable change to our area, and the promiseof increased activity in the job market.

Your Committee's past support and Committee's present suport for the North Loup Project is greatly appreciated. We believe you and your Committee's continued support of the North Loup Project will generate lasting benefits not only for our small town fut for Central Nebraska, for the State of Nebraska and the entire Nation.

Again, we thank you and your Committee for supporting the appropriation of $32,420,000.00 for Fiscal Year 1984 to provide the necessary funds for the continued construction of the North Loup Project.

STATEMENT OF STATE SENATOR HAROLD F. SIECK OF NEBRASKA

Dear Senator Hatfield:

I truly appreciate the work you have done for the North Loup Project in central Nebraska. This water development project is imperative to the State of Nebraska and I understand construction is progressing quite well. Due to extreme weather during the past year, construction is slightly behind schedule, but much will be accomplished in the upcoming year.

I encourage you to make continued funding of this project a high priority so construction is not delayed. This project has created needed employment here in Nebraska and the area the project is located in shows positive signs of an economic upswing. Not only will this project help this area out economically during construction, but such benefits will remain due to recreation and various other related matters.

Water projects of this type are an investment in the future of our country as well as our state. We are an agricultural state here in Nebraska, and such water projects are imperative for our future.

Other projects such as the Norden Dam and the Prairie Bend Project need to get off the drawing board and under construction. Future projects that will divert water from the Missouri River must someday become a reality. These projects supplement the groundwater in Nebraska that is disappearing at an alarming rate. We have plenty of rainfall, but we need projects of this type to capture the run-off and manage it efficiently.

In closing, I feel the North Loup Project is good, as are all projects of this type. I commend you for your support in the past and encourage you to continue supporting these projects.

Letter From Gov. Robert Kerrey of Nebraska

March 28, 1983

The Honorable Mark O. Hatfield
Chairman
Subcommittee on Energy and Water Development
Senate Committee on Appropriations
1322 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Hatfield:

This letter is written to express this new administration's support of the Bureau of Reclamation's Fiscal Year 1984 funding request of $32,420,000.00 for continued construction of the North Loup Division. This project will provide a full water supply to 53,000 irrigable acres, as well as providing recreation and fish and wildlife benefits.

Nebraska's economy is directly orientated to agriculture and agribusiness. Our State has just become the second leading state in irrigation in this Nation, with 7.9 million acres under irrigation in 1982. We continue to actively develop and preserve our agricultural economic base.

The current recessionary period has seen Nebraska record the highest unemployment figures since this State began statistical reporting in 1938. However, a bright spot has been the area where the North Loup Division is under construction. Unemployment is considerably below average, local businesses are expanding and numerous new businesses have been started in the local communities providing support services to this construction activity. The project has also stimulated private investment in a new 46-acre development near the Calamus Dam and Reservoir designed to serve some of the public's future recreation needs.

We fully expect this stimulating effect to continue throughout the construction period and on into the long-term operation of the North Loup Project. This increased business activity will be realized first at the local level. Next, it will "ripple" out into the State and National levels, not only through increased tax revenues, but also through increased demands from support businesses and industries. This has been the history of similar developments in our State.

Accordingly, we thank you and your Committee's continued support of the appropriation of $32,420,000.00 for Fiscal Year 1984 in order that the construction of the North Loup Division can be completed on schedule.

Sincerely,

Bob Kerrey

Robert Kerrey
Governor

STATEMENT OF STATE SENATOR JOHN W. DECAMP OF NEBRASKA

Dear Senator Hatfield,

In view of the fact that water conservation is of the utmost importance to this and future generations and projects such as the North Loup Division provide the means for that conservation, I would ask that you give this project every consideration when it comes before your Appropriations Committee.

The need for water is basic to the necessities of life and cannot be ignored while we continue to deplete the water supply. We must continue projects like this to take advantage of the water resources.

Therefore, I ask that your Committee act favorably on the 1983 fiscal year appropriation for the North Loup Division.

STATEMENT OF ROY L. OLSEN, MANAG[illegible] HOWARD GREELEY RURAL PUBLIC POWER DISTRICT

Dear Senator Hatfield:

As Manager of the Howard Greeley Rural Public Power District and on behalf of the District's Directors, I am writing this letter to voice the District's support for the North Loup Project. The Howard Greeley Rural Public Power District serves the area of the North Loup Project in the Counties Howard and Greeley.

While the immediate visible economic effects is seen throughout the construction area, we are confident the real impact of the Project will be felt throughout the entire Loup Valley upon the completion of the North Loup Project and irrigation water is delivered to approximately 53,000 acres in the Counties of Valley, Greeley, Howard, Merrick and Nance Counties, Nebraska.

The North Loup Project is a labor intensive project in relation to the total dollars spent. Labor dollars are for the most part spent in the Howard Greeley Rural Public Power District's trade territory, all of which contributes to stabilize not only the local area's economy, but will stabilize the economy throughout the entire State of Nebraska and the Nation as a whole.

We who provide electrical service to the area of the North Loup Project in the Counties of Howard and Greeley are convinced that you and your Committee's continued support for the funding of the North Loup Project will provide a lasting economic benefit to Central Nebraska and at the same time the North Loup Project will provide job opportunities for people in many areas of the State of Nebraska and for the whole Nation.

So, we do want to take this opportunity to commend you and your Committee for the confidence you have placed in the North Loup Project to provide funds for the continued construction of the North Loup Project for Fiscal Year 1984 in the sum of $32,420,000.00.

STATEMENT OF JACK ODGAARD, EXECUTIVE VICE PRESIDENT, NEBRASKA WATER RESOURCES ASSOCIATION

Dear Mr. Chairman:

On behalf of the officers, directors, and more than 5,000 members represented by the Nebraska Water Resources Association, I am writing to express our support for continued funding for the North Loup Division reclamation project. Specifically, we urge you to approve the $32,420,000 requested by the Administration in the fiscal 1984 budget.

Construction of the North Loup Division in the past year has had a tremendous beneficial impact in a considerable area of central Nebraska. New jobs are part of that benefit, but the construction activity also has provided a shot in the arm for the otherwise depressed economy because of the recession and low grain prices.

Associated with the project construction and new jobs have been significant increases in retail and wholesale businesses, services, and other businesses. They have resulted in considerable new single family housing construction, apartments and new motel facilities, and the opening of new retail establishments in the communities in the project area.

The North Loup project will continue to provide economic benefits not only during the remaining years of construction, but for decades after the project is completed. New permanent jobs will be created in the operation of the project, and new businesses and jobs will be provided in association with the outdoor recreation attractions and features of the project.

The Nebraska Water Resources Association gives its strong support for construction of the North Loup Division, and we urge your committee to approve continued funding in the fiscal 1984 appropriations.

STATEMENT OF STATE SENATOR LEE RUPP OF NEBRASKA

Dear Senator Hatfield:

Your committee is considering continued funding for the North Loup Division Project, the lower part of which is located in my Legislative District.

I am writing to ask for your continued support for this project. Construction of the North Loup Project is well underway. When completed, it will provide a means for conserving Nebraska's natural resource, water. This comes at a time when Nebraska and surrounding states have become acutely aware of our water needs and the challenges of increasing demand and decreasing supply. The North Loup Project is needed.

I thank you for your past support, and urge favorable action on appropriations for the North Loup Project.

STATEMENT OF STATE SENATOR ROBERT L. CLARK OF NEBRASKA

Dear Senator Hatfield:

I appreciate the opportunity to again express my support for the North Loup Project, which your committee is considering for continued funding.

It is my understanding that $32,420,00 has been recommended for the North Loup Division for Fiscal Year 1984. Construction of the Project is well under way and this appropriations would be a significant step toward completion of this much needed project. Your efforts are certainly appreciated.

I do hope that your committee will take favorable action to allocate funds again for this project.

STATEMENT OF STATE SENATOR MARTIN F. KAHLE OF NEBRASKA

Dear Senator Hatfield:

I understand you are again in the process of budgeting for the North Loup Division Project. I want to support the amount of $32,420,000, which would provide some supplemental funding for the year 1983 and also funding for fiscal year 1984.

This project is well underway and we are very pleased with its progress. I have a very deep interest in water conservation and irrigation as I have been a farmer and irrigator for many years and know the value of this type of project in this part of the country where rainfall is sparse at times.

We are very pleased that this project is coming into being and thank you for your past efforts. Please help us finish this project in Nebraska.

STATEMENT OF STATE SENATOR ELROY M. HEFNER OF NEBRASKA

Dear Mr. Hatfield:

I am writing this letter to you to urge you to support the appropriation bill for the funding for the North Loup Division Project (North Loup Irrigation Project) in Nebraska. I thank you for your past support.

I understand the hearing on this appropriation bill will be in the near future.

The North Loup Project will be funded at 32.4 million dollars. These funds will be used for the construction of the Calamus Dam, first section of the main canal and roads in the reservoir area. The North Loup Project is presently under construction with road relocation work, buildings and the foundation trench for the dam.

I am supporting the project and it has good local support. The Governor of Nebraska, along with the Congressional delegation are also supporting the project.

I would like to thank the committee for their past appropriations, and your favorable consideration will be greatly appreciated.

STATEMENT OF STATE SENATOR STEVE WIITALA OF NEBRASKA

Dear Senator Hatfield:

First let me take this opportunity to thank you and the members of your committee for the support you and your committee have provided the North Loup Project in the past. This letter is to urge your continued support of this necessary and desirable project.

As a Nebraska state senator and member of the Agriculture and Environment Committee, I have examined the North Loup Project, and am convinced it has the most positive implications for the economy of Nebraska, and the nation as well.

The importance of preserving our resources and of using them wisely is becoming more obvious to Nebraskans. Early storage of surface water for our future uses as well as for irrigation needs seems to make sense in this instance.

Your decision to fund the North Loup Project for fiscal year 1983 will be a wise one.

STATEMENT OF LEE ORTON, EXECUTIVE DIRECTOR, NEBRASKA ASSOCIATION OF RESOURCES DISTRICTS

Dear Senator Hatfield:

Once again for 1984, the Nebraska Association of Resources Districts is pleased to endorse and support Nebraska and the local sponsor's request for funding the North Loup Division, Pick Sloan Missouri Basin Program for Fiscal 1984.

Need for continued funding of $32,420,000 for next fiscal year is set out in the Bureau of Reclamation's project data sheets.

Our organization has strongly supported this project for many years and is pleased to have had many of its members personally visit the construction site in recent months. We have always maintained the importance of projects such as this one to balance and enhance the agricultural industry and its economic impacts upon Nebraska and the nation.

Now that we have begun to make good progress toward completion of this most important project, it is indeed essential to continue the effort with all deliberate speed.

Thank you and your colleagues for continued national support.

STATEMENT OF STATE SENATOR HOWARD LAMB OF NEBRASKA

Dear Chairman Hatfield, first, let me thank the committee for its support for the Nebraska North Loup division project through past appropriations.

I would like to now request the committee's continued support for the project. This project will present many long-term benefits through its conservation and management of our water resources. This will be in the State and National interest by providing for the needs of our agricultural economy.

Thank you for your consideration of this project.

STATEMENT OF STATE SENATOR HARRY B. CHRONISTER OF NEBRASKA

Dear Senator Hatfield, I would like to reiterate my position of last year relative to the North Loup division project in Nebraska. I feel that it is a very worthwhile project and one that is necessary to maintain a healthy and thriving agricultural economic level in the State of Nebraska.

Construction of the North Loup division project is well underway and is providing many jobs in the hard-pressed construction industry in Nebraska, as well as a shot in the arm for the local and State economy. The greatest benefits of the project will be long term. It will be a means for conserving and wisely managing our precious water resources and so provide for the needs of our agriculture-based economy far into the future.

Beyond the economic benefits to the State of Nebraska, the economic and conservation impact upon the Nation strongly supports continued funding for the North Loup division project. Therefore, I urge this committee to grant the request for continued funding for fiscal year 1984.

Thank you for your consideration.

STATEMENT OF STATE SENATOR CALVIN F. CARSTEN OF NEBRASKA

Dear Chairman Hatfield, I would like to express my support for the North Loup division project.

Nebraska is built on agriculture, and agriculture depends upon water. The conservation and wise management of our water resources is one of our most critical needs and the only way to insure the future of agriculture in Nebraska.

I ask your committee for favorable action on the appropriation for the North Loup project for fiscal year 1984.

STATEMENT OF STATE SENATOR JAMES E. PAPPAS OF NEBRASKA

Dear Senator Hatfield, I would like to take this opportunity to urge you and your committee to take favorable action on the 1984 fiscal year appropriation for the North Loup division project, scheduled for consideration later this month.

Water conservation is, of course, of critical importance to current and future generations. Projects such as the North Loup division provide a means of halting the depletion of our water supplies, thereby helping to insure that agricultural States like Nebraska will continue to provide the food products upon which this country and the world depend.

Thank you for your consideration.

STATEMENT OF STATE SENATOR RAY E. LUNDY OF NEBRASKA

Dear Senator Hatfield, Nebraska's water resources help to make agriculture the State's No. 1 industry, and this fact, combined with acknowledged need for conserving our basic resources, has convinced me that the North Loup division project is one deserving high priority. It is for this reason that I support it and ask that you give favorable consideration for its funding.

STATEMENT OF ROBERT B. CROSBY, FORMER GOVERNOR OF NEBRASKA

As a former Governor of Nebraska, I heartily and unqualifiedly endorse the North Loup project. The benefits of this project will extend to the entire Nation because it will greatly increase the capacity of Nebraska to supply grains and meat to sustain the population of this country. I urge that the requested appropriation for fiscal year 1984 be approved by your committee.

STATEMENT OF DONALD E. KILDAY, PRESIDENT, NORTH LOUP IRRIGATION DISTRICT

Dear Senator Hatfield, as a director of the North Loup Irrigation District and a landowner in the Loup River Valley, I have been a staunch supporter of the project since its very beginning. With many farmers having financial difficulties because of the economy, I feel it is of the utmost importance to this area that this project be completed as soon as possible.

On behalf of the North Loup Irrigation District, I would like to thank you for past appropriations which have resulted in much progress in construction at the dam site. I would urge that your committee give us continued support for the $32,420,000 for fiscal year 1984.

I thank you and your committee for this continued support.

STATEMENT OF HARRY LUSTGARTEN, JR., CHAIRMAN, NEBRASKA RAILROAD ASSOCIATION

Phil Kenny has indicated to me that you are quite interested in the North Loup unit in the Pick-Sloan Missouri basin project.

In view of the great importance of water to the preservation and development of agriculture in the North Loup area, we can well appreciate your interest in this project. The Nebraska railroads, of course, also have a direct interest in the continued well-being of the agricultural areas which they serve, and would look with favor upon projects which would foster the growth and development of agricultural production in those areas.

STATEMENT OF MAURICE A. KREMER, AURORA, NEBR.

Dear Senator Hatfield, the building of the North Loup project is progressing on schedule. May I urge your support of the continued funding and completion of this project. The economy of the area where this unit is being built is experiencing a real improvement, which will, in turn, affect our entire State.

Your favorable consideration will be most appreciated by most Nebraskans.

PRAIRIE BEND UNIT, NEBRASKA

STATEMENT OF JOHN VAN DERWALKER, EXECUTIVE DIRECTOR, PLATTE RIVER WHOOPING CRANE HABITAT MAINTENANCE TRUST

FISH AND WILDLIFE CONCERNS

Senator JOHNSTON. Next we have John Van Derwalker, Platte River Whooping Crane Habitat Maintenance Trust.

Mr. VAN DERWALKER. My name is John Van Derwalker. I am the executive director of the Platte River Whooping Crane Critical Habitat Maintenance Trust—Platte River Trust—located in Grand Island, Nebr. I appear before you today on behalf of the Platte River Trust to respectfully request you amend H.R. 1669 to assure the development of water management alternatives that are consistent with the purposes of the Endangered Species Act and the Migratory Bird Treaty Acts.

I have submitted this copy of testimony that I will give this afternoon to the House committee that will be discussing H.R. 1669 and I present this to you as some evidence that discusses this conflict. I will not go into the details of that. It is a simple conflict and it is a simply understood one and I hope that I can do that in about 2 or 3 minutes.

The Platte River Trust was formed in 1978 as a result of a Federal court-approved settlement of litigation between the State of Nebraska, Basin Electric Power Cooperative, and the National Wildlife Federation. The trust is administered by three trustees, one each designated by the State of Nebraska, the Basin Electric Power Cooperative, and the National Wildlife Federation. The Platte River Trust is charged with using the resources of the trust for the preservation of whooping crane, sandhill crane, and other migratory bird habitat in the Big Bend reach of the Platte River. This reach of river extends from near Lexington, Nebr., to near Chapman, Nebr., a distance of approximately 80 miles.

The Platte River has an incredible wildlife value as far as migratory birds are concerned. The whooping crane comes there. We have 250 bald eagles that stay in the area during the year. We have 7 to 9 million water fowls, including three-quarters of the population of geese. We have 188 migratory species that come to that river each year. Historically, the Platte River is approximately 2.5 million acre-feet annually. When irrigation developed and storage of the water, irrigated agriculture now consumes 1.5 million of that 2.5 million acre-feet. That water is diverted several times before it is finally consumed. That leaves about a million acre-feet of water in the river.

That reduction in flow has tremendously altered the ecology of the river and I won't try and go into that here, but I would want to say that it is salvageable. It can be kept in a suitable form with the flows that exist there today. But water is required; you must have water in the river. The Nebraska Game and Parks Commission has analyzed the flow regime that is required; they come up with 1,700 cubic feet; second, during the time the whooping cranes are there and to maintain a forest fish base for the birds that eat fish.

That total amount required, if you add that, is about 750,000 acre feet of water. If you add up the water applications that have been made by the Prairie Bend unit sponsors at 210,000 acre-feet and 125,000 acre-feet, you will see their total application for 365,000 acre-feet. Simple subtraction shows you 365,000 acre-feet from 1 million acre-feet does not leave 750,000 acre-feet. That does not mean they would divert that amount, and we recognize that. It is also possible that under the law of Nebraska they can divert considerably more than that. So the problem is a complex one.

There is a million acre-feet, but that is not a million acre-feet of developable water. In 1 year we had 1,200,000 acre-feet come down, in other areas we had as low as 110,000 acre-feet. I think we have to conclude there is potential conflict between the Prairie Bend unit, the Endangered Species Act, and the Migratory Bird Treaty Act, and it is the Trust's request if you direct the Department of the Interior to do this study, that you direct that it be conducted in a way that allows the development of only those alternatives that will protect the migratory birds' habitat and the flows required to maintain it.

Thank you.

Senator JOHNSTON. Thank you very much, Mr. Van Derwalker. I would think any feasibility study would properly look into those matters of alternatives in the normal course of things. I believe the Bureau will require that and certainly ought to be done as part of such a study.

Mr. VAN DERWALKER. The reason I am coming here before you today is that we are at the beginning, not at the end, and many of these environmental conflicts involving endangered species had programs presented to us by Federal agencies that are in conflict; and there are no alternatives that have been developed specifically in mind with the endangered species needs. In these cases we have these needs quantified and what is needed and studies can be made to develop those.

Thank you.

Senator JOHNSTON. Thank you very much, Mr. Van Derwalker.

[The statement follows:]

STATEMENT OF JOHN VANDERWALKER, EXECUTIVE DIRECTOR, PLATTE RIVER WHOOPING CRANE CRITICAL HABITAT MAINTENANCE TRUST

My name is John VanDerwalker. I am the Executive Director of The Platte River Whooping Crane Critical Habitat Maintenance Trust, (Platte River Trust) located in Grand Island, Nebraska. I appear before you today on behalf of The Platte River Trust to respectfully request you amend H.R.1669 to assure the development of water management alternatives that are consistent with the purposes of the Endangered Species Act and the Migratory Bird Treaty Acts.

The Platte River Trust was formed in 1978 as the result of a federal court-approved settlement of litigation between the State of Nebraska, Basin Electric Power Cooperative and The National Wildlife Federation. The Trust is administered by three trustees, one each designated by The State of Nebraska, The Basin Electric Power Cooperative and The National Wildlife Federation. The Platte River Trust is charged with using the resources of the Trust for the preservation of Whooping Crane, Sandhill Crane and other migratory bird habitat in the Big Bend reach of the Platte River. This reach of river extends from near Lexington, Nebraska to near Chapman, Nebraska, a distance of approximately 80 miles.

A portion of the Big Bend of the Platte River has been determined to be Critical Habitat for the Whooping Crane. This determination was made by the U. S. Fish and Wildlife Service on May 15, 1978. This area also provides important habitat for approximately 250 Bald Eagles which are also an endangered species. The Least Tern, which is on the Nebraska list of threatened species, nests in the Big Bend of the Platte River. Besides providing habitat for these endangered and threatened species, the Platte is used by 500,000 Sandhill Cranes, 7-9 million ducks and geese, and over 180 other migratory species.

In the last one hundred years, the Big Bend migratory bird habitat has been severely degraded by upstream water impoundment and diversion for irrigation purposes. The historic flow through the Big Bend reach of the Platte was approximately 2.5 million acre feet annually. About 1.5 million acre feet of the annual flow is now consumptively used by irrigators located upstream of the critical habitat area. This diversion of 60% of the Platte's water has radically changed the flow regime of the Platte River. For instance, at Overton, Nebraska, average peak flows have been reduced by 74% from an average of approximately 19,000 cubic feet per second (cfs) to about 5,000 cfs. Channel width at Overton has declined from about a mile to 1,200 feet, a 77% loss in width.

This change in flow regime has, in turn, completely altered the ecology of the river and its value to migratory birds. In the past, the Platte River floodplain was an unvegetated sandbed river flowing through a floodplain of wet meadows, marshes and grasslands. Trees were rare because of the high spring flood flows which scoured the riverbed, and prairie fires and periodic droughts which prevented trees from growing on the adjacent lands. Much of the Platte riverbed is now a cottonwood forest.

Vegetation encroachment on the riverbed begins with the growth of annual weeds on the sandbars which are exposed when the summer flows are diverted for irrigation. During the fall, winter and spring, when irrigation withdrawals are not being made, these sandbars are again submerged and trap sediment moving down the river, thus building the elevation of the island. This process is repeated each year until the sandbar is transformed into an island that becomes vegetated with willow bushes and then cottonwood trees. Once stabilized by willows and trees, these islands are not eroded away even by the rare floods which occasionally occur.

In the reach of the river from the confluence of the North and South Platte Rivers downstream to Lexington, vegetation encroachment has proceeded to the point where the entire riverbed is a cottonwood forest laced with small braided channels just a few yards wide. Even though there is still approximately 400,000 acre feet flowing through this reach of the river each year, it is of no practical value to cranes or spring migrating ducks and geese.

Near Lexington a large canal returns approximately 500,000 acre feet of water to the Platte. These waters are what remain of the one million acre feet diverted from the Platte near the confluence of the North and South Platte. This diversion is about 65 miles upstream and flows through a series of canals and reservoirs used for irrigation and power production purposes.

This return flow, when added to the 400,000 acre feet remaining in the river, has been enough to maintain some migratory bird habitat in the Big Bend reach of the river. Although vegetation encroachment is occuring in this reach, there are still many areas where there are open channels several hundred feet wide. The utility of these areas is illustrated by the numbers of birds that use the river. While there are practically no sandhill cranes using the 40 miles of river above Lexington, it is common to find 20,000 sandhills per mile of river in the open channels below Lexington, particularly on the roost sites near the towns of Gibbon, Wood River, Alda and Doniphan. Last year, at one site near Alda, approximately 30,000 Canada geese were observed roosting in less than two miles of river channel.

No one can doubt the importance of the Big Bend reach of the Platte River to Whooping Cranes, Sandhill Cranes, Bald Eagles, Least Terns and literally millions of other migratory birds. No one can deny that water must flow in the Platte if it is to provide the habitat necessary for the continued survival of the migratory birds that use it.

In the past, there have been legitimate questions about how much flow is required to maintain this habitat. However, information has been generated in recent years that tells us how much flowing water is required. To do this, two questions had to be answered. First, what are the physical conditions such as water depth, velocity and channel width, required by the birds? Second, how much water is needed and when must it flow to maintain these conditions?

The first question was the subject of a three-year research program by the United States Fish and Wildlife Service. The results of this research are reported in the Platte River Ecology Study. To fully explain the roosting behavior of cranes and thus understand their habitat requirements would take too much of your time. To summarize, the Whooping Cranes require, at least a 500-foot wide, unvegetated channel full of water. The depth of water over the roosting sandbars should be a foot or less. The 500-foot wide channel by no means provides optimum or even desirable habitat; it provides minimally adequate habitat. In addition to this direct need for water, instream flows must also be maintained to insure the high water table needed for the adjacent wet meadows and for scouring the roosting channel.

The United States Geological Survey conducted a series of research programs to address the second question, "how much water is needed to maintain the conditions described in the Platte River Ecology Study?" Other work has also been done by The Platte River Trust to quantify the instream flows needed for migratory birds. The Nebraska Game and Parks Commission has used this and other information to determine the flows needed to maintain the habitat for Whooping Cranes, Bald Eagles and Least Terns. They have concluded that:

> "Specific quantities and distribution of flows are needed to maintain essential habitat on the Platte River for three endangered and threatened species: 1) a flow of 1,700 cfs in the river between Overton and Grand Island is needed to provide suitable roosting, feeding and loafing habitat for the Whooping Crane during the spring and fall migration; 2) In order to initiate biological response in wet meadow vegetation and invertebrate populations before Whooping Cranes arrive in the spring, flows of 1,100 cfs beginning March 1 should be provided through the Overton to Grand Island reach; 3) a flow regime of 3,800 cfs for 23 days per year is currently being recommended as scouring flows which are required to maintain a 500-foot-wide channel free of woody vegetation in the Overton to Grand Island reach; 4) a flow of 1,100 cfs must be present at Overton from December 10 to February 25 to provide essential habitat for wintering Bald Eagles; 5) a flow of 400 cfs must be maintained through the Kearney to Duncan reach of the Platte River throughout the year to provide habitat for the survival and annual production of fish suitable as food for the Least Tern. A flow regime that would maintain a channel width that is free of woody vegetation and suitable to Whooping Cranes would provide the scouring needed to maintain a sandbar substrate suitable for Least Tern nesting."

The biological opinion further stated:

> "Jeopardy to the continued existence of the Whooping Crane, Bald Eagle and the Least Tern can be avoided if the habitat flow requirements as described above are satisfied. Although the annual average flows in the Platte River at Overton appear to be sufficient for meeting the demands of the Prairie Bend and Little Blue Projects, not enough water would be available to meet all of the habitat flow requirements with both of them in operation."

The clearly-stated conclusion is that if the Prairie Bend Project, which has applied for the right to divert 210,000 acre feet of water annually, and the Little Blue Project, which has applied for the right to divert 125,000 acre feet of water annually, are constructed, it would jeopardize the continued existence of the Whooping Crane, Bald Eagle and Least Tern.

The U. S. Fish and Wildlife Service has issued similar jeopardy opinions on three other upstream water diversions that are far smaller amounts than the 210,000 to 365,000 acre feet of annual diversion proposed by Prairie Bend sponsors.

These jeopardy opinions included the Riverside Irrigation proposal to divert 11,000 acre feet annually from the South Platte in Colorado, the Missouri Basin Power Project's 23,000 acre feet annual diversion from the North Platte and the Bureau of Reclamation's proposed annual depletion at Overton of 91,800 acre feet. These opinions were issued on April 12, 1982, December 8, 1978 and January 20, 1983 respectively.

The bill we are discussing today, H. R. 1669, would authorize a feasibility study for the Prairie Bend Unit. It directs the Secretary of the Interior to develop plans for water diversion and storage facilities to serve the irrigation needs of landowners in Dawson, Buffalo and Hall Counties, Nebraska.

The bill fails to recognize the serious conflict that exists between further diversions for irrigation and maintenance of critical migratory bird habitat on the Platte. The only language in this bill that is related to the Platte River critical habitat is "Such feasibility study shall include a detailed report on any effects the proposed project may have on wildlife including the habitat of the sandhill crane and endangered whooping crane." The feasibility study should have a more positive approach toward the preservation of migratory bird habitat. The study should determine what further development is possible consistent with the Endangered Species Act and the Migratory Bird Treaty Acts. This kind of information is what is needed to determine the federal government's role in the management and development of Platte River water.

It is time for us to recognize the possible conflicts between western water development and the nation's environmental policy as stated by N.E.P.A. It is time for the Congress to contribute to a long-term solution of the continuing encroachment on the remaining migratory bird habitat of the Platte River. This can be done by funding studies that are clearly consistent with previous Congressional actions to protect our environment and wildlife. Perhaps if all the parties interested in how Platte flows are managed could be brought together in a feasibility study where each of their interests would be fairly examined, alternative solutions to the existing conflict could be found.

The Trust believes this proposed feasibility study should recognize the value of migratory bird habitat of the Platte River. It should respect and carry out the conservation and environmental laws of the land and set in motion a process that will lead to a resolution of conflicts.

We should make maximum use of federal and state resources and hasten those actions that must be taken to insure the continued existence of critical migratory bird habitat on the Platte River of Nebraska.

We respectfully request you amend H. R.1669 to require an examination of alternatives that would meet the needs of Platte River migratory bird habitat and to seek an accommodation between these needs and the other beneficial uses of water. We propose that the following language be included in the bill: Such feasibility study shall develop water management alternatives that are consistent with the Endangered Species Act and the Migratory Bird Treaty Acts.

MISSOURI NATIONAL RECREATION RIVER

STATEMENT OF EARL ROWLAND, PRESIDENT, MISSOURI RIVER BANK STABILIZATION ASSOCIATION

ACCOMPANIED BY DARREL CURRY, VICE PRESIDENT, MISSOURI RIVER BANK STABILIZATION ASSOCIATION

Senator JOHNSTON. Mr. Rowland, did you get a chance to complete your testimony?

Mr. ROWLAND. I am here today on behalf of another project. And I have with me, Mr. Darrell Curry, vice president of our association.

Mr. Chairman and members of the subcommittee, we appreciate the chance to appear before you on behalf of the Missouri River Bank Stabilization Association to testify regarding the fiscal year 1984 budget. We would like to speak on behalf of funding for the Missouri National Recreation River project which was authorized by Congress in 1978. This project is a 59-mile stretch of the Missouri River between Gavins Point Dam near Yankton, S. Dak., and Ponca State Park, Ponca, Nebr.

The project is authorized for $21 million, but for fiscal year 1984, $2.5 million is needed for construction and $200,000 for operation and maintenance. The reason for the operation and maintenance money is to protect and maintain $5,743,000 worth of existing structures already built in this reach of the river under the authorization of section 32 of the Streambank Erosion Control and Demonstration Act which ended this year—1983.

The authority for operation and maintenance of these structures is in the Missouri National Recreation River authorization in which it states, "Any structures built or existing structures already built will be operated and maintained by the Federal Government who is the controlling agency." The term, "recreation river" is very misleading as the plan only calls for about 5 percent of the money to be spent on recreation, mainly in the form of a few public access areas and boat ramps. The main thrust and purpose of the project is to help control much of the bank erosion caused by the construction of the mainstream dams on the Missouri River, and to preserve the timber, scenic beauty, and pristine values of the river for future generations which they may never see if projects such as this are not completed.

The dams have done an exceptionally good job of preventing floods in the lower reaches of the river and will probably do so again this year with the above normal inflows into the system last fall and winter and also expected this spring. This will mean higher releases from the dams to evacuate the water necessary to increase the holding capacity of the reservoirs through the 1984 season which will be good news to the navigation, hydroelectric, and irrigation interests, and the many cities who depend on the river for water, but bad news to our reach of the river as this always accelerates the rate of bank erosion.

Many years ago when the Missouri River was completely free and unrestrained, Robert Burdett made the comment that the Missouri River should be called "the Harlot," because she changed beds so often. The Corps of Engineers, with the aid of the dams and channalization, did try to change her morals. However their job wasn't completed and the lady is still very promiscuous in our 59-mile stretch of the river.

The administration keeps talking about local cost sharing and this project being a new start, but we feel that with almost $6 million spent on bank stabilization structures in this stretch of the river in the last 8 years and $600,000 spent in completing the necessary environmental impact statements, cultural and archeological research, and advanced engineering and design for the national recreation river, that we are up to the construction stage.

Also, when you consider the lands the farmers have lost, the taxes the local governments have lost, the easements and rights of ways donated by the farmers, we wonder if local interests haven't already paid more than their fair share. A study team comprised of Federal, State, county, and local agencies, as well as environmental groups and farmers, have worked for many years with the Corps of Engineers in developing ideas and plans for the river. An advisory group composed of the same people has been formed and are holding meetings to help in future planning.

Funding of this project would provide a very desirable and long-time effect in saving one of the few remaining natural areas and natural rivers in our Nation. So we would very respectfully ask that this project be funded in the amount requested: $2.5 million for construction and $200,000 for operation and maintenance in fiscal year 1984.

I was pleased to hear the witnesses from the Port of New Orleans talk about shoaling in the navigation channel because work on projects such as ours will help very much to decrease the silt load in the Missouri, which eventually ends up in the Mississippi River delta.

We thank you and will be happy to answer any questions you might have.

Senator JOHNSTON. Thank you very much Mr. Rowland, and we appreciate your testimony.

Next, we have Joan Halstead, chairman of the Papio Natural Resources District.

PAPILLION CREEK AND TRIBUTARIES FLOOD CONTROL PROJECT

STATEMENT OF JOAN HALSTEAD, CHAIRMAN, PAPIO NATURAL RESOURCES DISTRICT

ACCOMPANIED BY:

JERRY WEHRSPANN, GENERAL MANAGER, PAPIO NATURAL RESOURCES DISTRICT

DOROTHY SASS, DIRECTOR, PAPIO NATURAL RESOURCES DISTRICT

Ms. HALSTEAD. Mr. Chairman, I have with me the general manager from the Papio Natural Resources District, Mr. Jerry Wehrspann; and the director, Dorothy Sass.

I am Joan Halstead, chairman of the Papio District. The Papio Natural Resources District wishes to take this opportunity to request continued support for flood control activities related to the Papillion Creek and tributaries flood control project. This project is of vital interest and concern to the district. The Papillion Creek and tributaries project has been discussed many times with your committee and we will not review historical items which you have in your files. We appreciate your previous support for the project and ask for your continued support of Federal involvement in this needed project.

The administration's fiscal year 1984 proposed budget requests $4.4 million for the Papillion Creek and tributaries project. It is our understanding that these funds would be used for work on site 18, site 20, and the reevaluation study which is currently underway. Accomplishments which would be anticipated include completion of land acquisition at site 18, completion of relocations at site 20, and continued work on relocations at site 18. Approximately $1.8 million of the requested $4.4 million would be used to continue construction of site 18. Funds would also be provided for revegetation work at both sites and to initiate recreation facilities development at site 20. The current reevaluation of the flood control needs in the Papillion Creek basin would also be funded by the requested appropriation.

The fiscal year 1983 $9.5 million appropriation will result in the completion of construction of site 20 and initiation of construction on site 18. The district appreciates your support for this project and would urge your continued support in the coming fiscal year so that the project can proceed.

The Papio Watershed Coordinating Committee met five times in 1982. The Papio Watershed Coordinating Committee consists of representatives from local governmental agencies and interested organizations that are interested in the Papillion Creek project. These include: The cities of Omaha, Papillion, and Ralston; villages of Bennington and Washington; Washington County Board of Supervisors, Douglas County Board of Commissioners, Sarpy County Board of Commissioners, Papio Natural Resources District, Papio Valley Preservation Association, and Papio Flood Protection Association.

This committee has been working with the Corps of Engineers as they proceed with their reevaluation study of the flood control needs in the basin. At the present time, the Corps has completed their problem identification portion of the study and is currently investigating methods to reduce flood damages in the basin. We are hopeful that the efforts of the Corps will result in a plan that is both effective and implementable.

In summary, we would like to thank you for your past support for this project and urge your continued support for this project by funding the proposed budget for fiscal year 1984 of $4.4 million.

Senator JOHNSTON. Thank you very much, Ms. Halstead.

Our final witness this morning will be Mr. Neal Payne, who is president of the Goshen Irrigation District.

GUERNSEY DAM, NEBR.—SILT RELEASES

STATEMENT OF NEAL PAYNE, PRESIDENT, GOSHEN IRRIGATION DISTRICT

ACCOMPANIED BY:

PHIL HORT, PRESIDENT, GERING-FORT LARAMIE IRRIGATION DISTRICT
ROBERT THOMAS, DIRECTOR, GERING-FORT LARAMIE IRRIGATION DISTRICT
BILL FRANKS, COMMISSIONER, GOSHEN IRRIGATION DISTRICT
DALE STAMAN, PRESIDENT, PATHFINDER IRRIGATION DISTRICT
DAVE DILLMAN, VICE PRESIDENT, PATHFINDER IRRIGATION DISTRICT
AL HOYT, DIRECTOR, PATHFINDER IRRIGATION DISTRICT

Mr. PAYNE. Senator Johnston, I would like to introduce our group. With me is Bob Thomas and Phil Hort of the Gering-Fort Laramie Irrigation District; Bill Franks with Goshen Irrigation District; appearing for Pathfinder Irrigation District is Dave Staman, Dave Dillman, and Al Hoyt.

Senator JOHNSTON. Welcome, gentlemen.

Mr. PAYNE. We are part of the North Platte project in Wyoming and Nebraska. At this time, I would like to thank the Senate subcommittee for their help in providing funds last year. For the record, we have a large supplemental memorandum from which we have taken what is in the small memorandum books for each committee member. At this time, I would like to read a statement that we have prepared.

Mr. Chairman and committee members, we have previously submitted documents compiled by our attorney, Mr. Bob Sigler, to the Bureau of Reclamation concerning the unfairness of power interruption charges assessed against the Goshen, Gering-Fort Laramie, and Pathfinder Irrigation Districts. In a March 7, 1983, reply, the Interior Department returned a negative response. For that reason, we are here today seeking a legislative solution to our problem.

BACKGROUND

From 1908, when Pathfinder Dam was built, until 1927, when Guernsey Dam was constructed 168 miles downstream, silt entered the North Platte project continually by natural means. The construction of the Guernsey Dam greatly reduced that natural process because it served as a settling basin. For many years thereafter, the project was plagued with ever-increasing seepage losses, sloughing banks, and on-farm irrigation problems. In 1936, a remedy was found by providing a silt run—the lowering of the water level in the Guernsey Dam until water cut through the sediment and carried it downstream into the irrigation projects sealing the canals and significantly decreasing seepage. Silt runs have been made almost annually ever since and their necessity is apparent to both the Bureau and the irrigators.

In 1952, the U.S. Government purchased the North Platte project power rights from the irrigators. It is important to note, that after the contracts were signed, silt runs were provided by the Bureau without charge from 1952 until 1959. In 1959, with a change of personnel, the Bureau informed the irrigation district they would have to pay for the power loss caused by the silt run. The irrigators protested and the Bureau did not attempt to charge again until 1975. They have maintained that position ever since. The position of the irrigation districts is that the Bureau guaranteed us silt runs without charge during the negotiations of 1948–51.

To support our position, we have placed in the record excerpts from Bureau and irrigation district records documenting the negotiations leading up to the execution of the contracts. From the very inception of the negotiations, the Bureau gave assurances that the silt run practice would be continued. By the time the contracts were signed, the farmers were confident that irrigation took priority over power and that included silt runs when needed at no charge. The irrigators were confident in the language of the contracts. A prime example is paragraph 6 of the 1952 Pathfinder contract. We quote:

> 6. The district's right to project water for irrigation uses shall be protected, conserved and administered first in right as against other uses, and such right shall not be impaired by the operation by the United States of any power producing facilities now or heareafter constructed.

This language was in harmony with earlier court cases and the 1945 Supreme Court decree which emphasized that the water in our projects belongs to the landowners and that power generation is secondary to irrigation.

To further support our position, we have placed on record affidavits from the irrigators and Bureau administrators who conducted the negotiations. All irrigators stated that they know the need for the silt runs, that they were assured by the Bureau that the silt runs would be continued at no charge, and that the districts would never have signed the contracts if they thought there ever would be a charge. Bureau administrators stated that the Bureau promised the irrigation districts they would continue to have silt runs when needed at no charge.

It is important to note, that the farmers did not go to the Bureau asking them to buy the power rights. It was the Bureau who came to the farmers and commenced the negotiations in 1948. By buying those rights and subsequently building Glendo Dam, it allowed the water to flow and power to be produced from the upstream facilities for 12 months of the year instead of the 5-month irrigation season. At the time of the negotiations, the farmers recognize that the purchase would significantly improve the efficiency of the whole power system; and it has. The project is paying off ahead of schedule and the people of our country are benefiting from lower priced electricity. But there is no need to further increase revenues by betraying the farmers who made the purchase possible. The farmers knew from the Guernsey Dam experience that the construction of Glendo Reservoir 20 miles upstream would further decrease silt and aggravate the situation, and it has. Bureau records show that Glendo decreased the silt flowing into Guernsey by 90 percent. I ask you, do you think the farmers would have been so ignorant as to negotiate away something that is so crucial to their livelihood?

We, as farmers, feel very frustrated when we made an agreement with our own Government in good faith and mutual understanding, and years later have different people in a branch of our Government change the interpretation of that agreement. We do, however, believe there is strength in truth and that truth is on our side. We are convinced that the courts of our land would uphold our side of the dispute. But with the documentation we have, it is our sincere hope and request that you will be able to convince the Bureau of Reclamation to stop action until you have time to resolve this matter legislatively once and for all, without the need for expensive drawn-out court action.

Thank you.

Senator JOHNSTON. Thank you very much, Mr. Payne. Do your Senators and Congressmen support you in this position?

Mr. PAYNE. Yes, they do support us in this position.

Senator JOHNSTON. I see these power charges were begun in 1975. They were paid in the protest from that date forward?

Mr. PAYNE. Yes, they were much of the time.

Mr. HORT. They paid all these projects out of protest from the start.

Senator JOHNSTON. Why do you make your complaint to us, since you have been doing this since 1975?

Mr. HORT. We have been working with the Bureau, trying to resolve this situation.

Mr. FRANKS. We farmers are a little slower than the average population. I am a farmer; it takes us a little time before it finally soaks in what is going on.

Senator JOHNSTON. We will take this up with the Bureau of Reclamation and ask for a detailed response to your charges and find out what their position is.

Mr. PAYNE. I have some comments from the Pathfinder Irrigation District also.

Mr. HORT. I am Allan Hort. I have been a director since 1952 and I am the only one of the directors or the personnel in the Bureau that is around today. We did meet with, to answer your question, Mr. Chairman, Virginia Smith, and we did meet with the Bureau in January of this year. And the point that they make out is that the amount of money that they paid was for the power. We asked them very plainly, "Was that not a good deal? Isn't the package paying out?" I will quote exactly what they said: "The repayment is on schedule for that contract. So it was a good deal."

What we are talking about is whether the United States operated the system from 1908 to 1926, they had this and now they are denying us the same thing and tell us we have to keep the system whole—whether we should keep it whole, we are not denying that. But we cannot see the justice. They have the silt, then they take it away from us.

Senator JOHNSTON. Very good. Well your statements are very important and we will get the detailed response from the Bureau. Thank you very much gentlemen.

[The statement follows:]

STATEMENT OF PATHFINDER, GERING-FORT LARAMIE, AND GOSHEN IRRIGATION DISTRICTS, NEBRASKA

We have previously submitted documents compiled by our attorney, Mr. Bob Sigler, to the Bureau of Reclamation concerning the unfairness of power interruption charges assessed against the Goshen, Gering-Fort Laramie, and Pathfinder Irrigation Districts. In a March 7, 1983 reply, the Interior Department returned a negative response. For that reason, we are here today seeking a legislative solution to our problem.

From 1908, when Pathfinder Dam was built, until 1927 when Guernsey Dam was constructed 168 miles downstream, silt entered the North Platte Project continually by natural means. The construction of Guernsey Dam greatly reduced that natural process because it served as a settling basin. For many years thereafter, the project was plagued with ever increasing seepage losses, sloughing banks, and on farm irrigation problems. In 1936, a remedy was found by providing a silt run--the lowering of the water level in the Guernsey Dam until water cut through the sediment and carried it downstream into the irrigation projects sealing the canals and significantly decreasing seepage. Silt runs have been made almost annually ever since and their necessity is apparent to both the Bureau and the irrigators.

In 1952, the U. S. Government purchased the North Platte Project power rights from the irrigators. It is important to note, that after the contracts were signed, silt runs were provided by the Bureau without charge from 1952 until 1959. In 1959, with a change of personnel, the Bureau informed the irrigation district they would have to pay for the power loss caused by the silt run. The irrigators protested and the Bureau did not attempt to charge again until 1975. They have maintained that position ever since. The position of the irrigation districts is that the Bureau guaranteed us silt runs without charge during the negotiations of 1948-1951.

TO SUPPORT OUR POSITION: We have placed in the record excerpts from Bureau and Irrigation District records documenting the negotiations leading up to the execution of the contracts. From the very inception of the negotiations, the Bureau gave assurances that the silt run practice would be continued. By the time the contracts were signed, the farmers were confident that irrigation took priority over power and that included silt runs when needed at no charge. The irrigators were confident in the language of the contracts. A prime example is paragraph 6 of the 1952 Pathfinder contract. We quote,

> 6. "The District's right to project water for irrigation uses shall be protected, conserved and administered first in right as against other uses, and such right shall not be impaired by the operation by the United States of any power producing facilities now or hereafter constructed." Unquote.

This language was in harmony with earlier court cases and the 1945 Supreme Court Decree which emphasized that the water in our projects belongs to the landowners and that power generation is secondary to irrigation.

TO FURTHER SUPPORT OUR POSITION: We have placed on record affidavits from the irrigators and Bureau administrators who conducted the negotiations. All irrigators stated that they knew the need for the silt runs, that they were assured by the Bureau that the silt runs would be continued at no charge, and that the districts would never have signed the contracts if they thought there ever would be a charge. Bureau administrators stated that the Bureau promised the irrigation districts they would continue to have silt runs when needed at no charge.

It is important to note, that the farmers did not go to the Bureau asking them to buy the power rights. It was the Bureau who came to the farmers and commenced the negotiations in 1948. By buying those rights and subsequently building Glendo Dam, it allowed the water to flow and power to be produced from the upstream facilities for twelve months of the year instead of the five month irrigation season. At the time of the negotiations, the farmers recognize that the purchase would significantly improve the efficiency of the whole power system. And it has. The project is paying off ahead of schedule and the people of our country are benefiting from lower priced electricity. But there is no need to further increase revenues by betraying the farmers who made the purchase possible. The farmers knew from the Guernsey Dam experience that the construction of Glendo twenty miles upstream would further decrease silt and aggravate the situation. And it has. Bureau records show that Glendo decreased the silt flowing into Guernsey by 90 percent. I ask you, do you think the farmers would have been so ignorant as to negotiate away something that is so crucial to their livelihood.

We as farmers, feel very frustrated when we made an agreement with our own government in good faith and mutual understanding, and years later have different people in a branch of our government change the interpretation of that agreement. We do however, believe there is strength in truth and that truth is on our side. We are convinced that the courts of our land would uphold our side of the dispute. But with the documentation we have, it is our sincere hope and request that you will be able to convince the Bureau to stop action until you have time to resolve this matter legislatively, once and for all, without the need for expensive drawn our court action.

CONCLUSION:

Silt runs by the Irrigation Districts from Guernsey Reservoir are an absolute must.

The Bureau of Reclamation has always recognized the need for silt runs.

Water itself is the sole foundation of the livelihood of the irrigated farmers under the North Platte Project. Silt is a necessary ingredient in the conveyance of that water and in maintaining good farming practices.

Not only the quantity of water is important but also the quality of water is just as important.

Irrigated farming is the backbone of the economy in the North Platte Valley.

Farmers, for the most part are not lawyers, but devote their time and effort trying to make a living from farming.

The Irrigation Districts and the farmers who make up and constitute the districts had every right to believe that they would continue to receive the desired and requested silt runs without a power interruption charge. If it were otherwise, the Irrigation Districts would have never agreed to the Amendatory Contracts of 1952 and would have never transferred its power facilities to the Bureau of Reclamation. A farmer doesn't sell the tools of his trade or what he has to have to produce his living from farming. Isn't it only fair that the Bureau of Reclamation be required to honor its past commitments and representations?

If the farmers cannot rely upon representations made by Bureau of Reclamation representatives in the operation and management of the North Platte Project or cannot rely upon such representations when made in negotiating a contract, then without a doubt, our whole system of Government is in deep trouble.

The Irrigation Districts have no quarrel, for the most part, with the Casper Division Office of the Bureau of Reclamation. The Districts main and constant contact is through that office and everyone should attempt to work for the betterment of the North Platte Project, however, it appears in the instant case, things get fouled up royally sometimes in the hierarchy of the Bureau of Reclamation.

The Bureau of Reclamation is bound by law for representations made by its officials and is bound by the law and decisions cited in this Memorandum.

Certainly the Irrigation Districts do not want an out and out court fight with the Bureau of Reclamation, if it can be avoided. The Irrigation Districts and the Bureau should cooperate to the full extent to assure the continued success of the North Platte Project. But on the other hand, Government cannot run roughshod over the farmers as it is attempting to do, in this instance.

The attached exhibits are filled with detailed information and testimony and should not be ignored.

Power interruption charges by the Bureau for silt runs are not only arbitrary but are illegal and unjust as pointed out in the foregoing Memorandum.

NATIONAL RECLAMATION ACT OF JUNE 17, 1902:

The Reclamation Act of 1902, 43 U.S.C.A. § 371 et seq., was

> "an act appropriating the receipts from the sale and disposal of public lands in certain states and territories to the construction of irrigation works for the reclamation of arid lands."

The production of power from these projects was an afterthought and was authorized by Congress in 1906. The power produced was to be used for pumping in connection with the irrigation project, 43 U.S.C.A. § 522.

The North Platte Project was one of the first five projects authorized under the Act, on March 14, 1903. The original project was started in 1904 with the commencement of construction of Pathfinder Dam and completed approximately 23 years later with the construction of Guernsey Dam. Section 372 of the Reclamation Act, 43 U.S.C.A. § 372, provides that:

> "The right to the use of water acquired under the provisions of Sections 372, 373, 381, 383, 391, 411, 416, 419, 421, 431, 432, 434, 439, 461, 491 and 498 of this title shall be appurtenant to the land irrigated, and beneficial use shall be the basis, the measure, and the limit of the right."

In a case analagous to the problem faced here, the Secretary of Interior sought to deprive irrigators, holders of adjudicated rights under a reclamation project of part of their water and to charge them with costs to which they had not agreed. In interpreting the above section the U.S. Supreme Court in Ickes, Secretary of the Interior v. Fox, 300 U.S. 82, 93 (1937), said:

> "the government did not become the owner of the water-rights, because those rights by act of Congress were made "appurtenant to the land irrigated",

The Court also stated on page 95 of their opinion that:

> "The government was and remained simply a carrier and distributor of the water, with the right to receive the sums stipulated in the contracts as reimbursement for the cost of construction and annual charges for operation and maintenance of the works." Citing Murphy v. Kerr, 296 Fed. 536. 544, 545.

The instant case is a good example of the Bureau overstepping the authority granted by Congress when it imposes charges on the Irrigation Districts, not specifically authorized by the contracts. Neither the North Platte Project irrigators nor their respective irrigation districts agreed by the Amendatory Contracts to pay for power interruption charges and everyone involved and most certainly the Bureau knew there would be continued silt runs.

Section 522 of the Reclamation Act, 43 U.S.C.A. § 522 provides:

> "That no lease shall be made of such surplus power or power privileges as will impair the efficiency of the irrigation project."

The failure to release silt into the North Platte Project canals definitely impairs the efficiency of the irrigation project. No provision can be found in the Reclamation Act authorizing anyone to charge the irrigatoars or their respective irrigation districts for power interruptions caused by the operation of the irrigation system. Furthermore, by charging the irrigation districts for the power interruption resulting from the silt runs, the Bureau is acting in defiance of the intent of Congress and the law. In Burley Irrigation District v. Ickes, Secretary of the Interior, 116 F.2d 529, 531, (D.C. Cir. 1940), Cert. Den. 61 S. Ct. 614 (1941), the Court said:

> "The statute and its amendments are reclamation acts, not commercial power development acts. The legislation is entirely consistent with the development and the sale of commercial power whenever they may interfere with the development of irrigation or impair the efficiency of the irrigation project."

AFFIDAVIT

STATE OF NEBRASKA)
) ss
COUNTY OF MORRILL)

Al Hoyt, being first duly sworn, does depose and state as follows:

1. That I am 76 years of age and have been a resident of Morrill County, Nebraska, since 1920.

2. That my mailing address is Star Route, Bayard, Nebraska.

3. That I started farming in the year 1920 and farmed continuously until the year 1972, at which time I retired. I farmed continuously in Morrill County, Nebraska, for a period of 52 years.

4. I served on the Board of Directors of Pathfinder Irrigation District for a period of twenty-eight (28) continuous years, commencing in the year 1952. Previous to being elected to the Board, I had considerable contact with the Board because of my farming operations under the Irrigation District. I worked for the Bureau of Reclamation part time for several

years, starting in about the year 1922 or 1923. I worked on the survey crews and helped make concrete weirs and did several miscellaneous jobs for the Bureau. I became very much interested in the North Platte Project and the water system. It was always my livelihood. I remember well some short water years and I can verify from experience how much more ground you can effectively cover when irrigating with silt in the water.

5. I was a member of the Board of Directors of Pathfinder Irrigation District at the time the Amendatory Contract between the USA and the Pathfinder Irrigation District was made and entered into on September 22, 1952, and participated in some of the negotiations leading up to the execution of such Amendatory Contract.

6. Affiant, having been engaged in irrigated farming in the North Platte Valley since the year 1920, was well acquainted with the value and importance of silt and before the construction of Guernsey Reservoir he never had a silt problem because there was always some silt in the water. After the construction of Guernsey Reservoir and its completion in July of 1927, it became apparent that Guernsey Reservoir was trapping and holding silt which was needed to seal the canals and ditches and silt runs were periodically made out of Guernsey Reservoir.

7. Basically, the above mentioned Amendatory Contract of 1952, sold the projects's power facilities to the United States for a credit on the Irrigation District's construction charges owed to the United States; and in negotiating for the Amendatory Contract with representatives from the Bureau of Reclamation, we, on several occasions, talked about silt runs and were assured that our silt runs, when needed, would not be affected, in any way, by the Amendatory Contract.

8. Our experience, before the Amendatory Contract was ever entered into or even negotiated, dictated to us the fact that we needed the silt run. With the silt run we could deliver much more water from our canal to our irrigators and they, in turn, could put it to more effective use. In no way was Pathfinder Irrigation District going to relinquish its right to the silt run because it needed the silt run, wanted it, and fully intended to preserve this right without any cost or charge made by

the Bureau.

9. Paragraph 6 of the Amendatory Contract, wherein it is stated as follows:

> "The District's right to project water for irrigation uses shall be protected, conserved and administered first in right as against other uses, and such right shall not be impaired by the operation by the United States of any power producing facilities now or hereafter constructed..."

supposedly protected the Irrigation District as to its silt run and from the time the Amendatory Contract was executed until the summer of 1959, silt was released from Guernsey Reservoir when needed, and no claim for lost power revenue was ever made by the Bureau or asserted against the Irrigation District.

10. If Affiant or any member of the Board of Directors of the Pathfinder Irrigation District or any irrigator under the project would have had any idea that the Bureau of Reclamation would subsequently attempt to levy a power interruption charge on the Irrigation District for the silt run, the Irrigation District and its landowners would never have approved the Amendatory Contract.

11. Affiant states firmly that it was never the intent of either of the parties to the Amendatory Contract, at the time it was entered into, to levy a power interruption charge against the Irrigation District for the silt run and such power interruption charge apparently was an after thought by someone in the Bureau of Reclamation and is grossly unfair and inequitable to the Irrigation District and to its landowners who eventually must pay such a charge.

DATED this 27 day of August, 1982.

Al Hoyt
Al Hoyt

Subscribed in my presence and sworn to before me this 27th day of August, 1982.

Margaret L Harriger
Notary Public

My Commission expires: 4-9-84

AFFIDAVIT

STATE OF NEBRASKA)
) ss
COUNTY OF SCOTTS BLUFF)

Harold Ledingham, being first duly sworn, does depose and state as follows:

1. That I am 76 years of age and have been a resident of Scotts Bluff County, Nebraska, since 1910.

2. That my mailing address is Route 1, Mitchell, Nebraska.

3. I farmed continuously in Scotts Bluff County, Nebraska, for a period of 46 years.

4. I served on the Board of Directors of Gering-Fort Laramie Irrigation District for a period of twelve (12) continuous years, having started serving in such capacity in 1950.

5. I was a member of the Board of Directors of Gering-Fort Laramie Irrigation District at the time the Amendatory Contract between the USA and the Gering-Fort Laramie Irrigation District was made and entered into on September 22, 1952, and was a member of said Board during the negotiations leading up to the execution of such Amendatory Contract.

6. Affiant, having been engaged in irrigated farming in the North Platte Valley practically his whole life, was well acquainted with the value and importance of silt and before the construction of Guernsey Reservoir he never had a silt problem because there was always some silt in the water. After the construction of Guernsey Reservoir and its completion in July of 1927, it became apparent that Guernsey Reservoir was trapping and holding silt which was needed to seal the canals and ditches and silt runs were periodically made out of Guernsey Reservoir.

7. Basically, the above mentioned Amendatory Contract of 1952, sold the project's power facilities to the United States for a credit on the Irrigation District's construction charges owed to the United States; and in negotiating for the Amendatory Contract with representatives from the Bureau of Reclamation, we, on several occasions, talked about silt runs and were assured that our silt runs, when needed, would not be affected, in any way, by the Amendatory Contract.

8. Our experience, before the Amendatory Contract was ever entered into or even negotiated, dictated to us the fact that we needed the silt run. With the silt run we could deliver more than 100 c.f.s. of additional water from our canal to our irrigators. In no way was Gering-Fort Laramie Irrigation District willing to relinquish its right to the silt run because it needed the silt run, wanted it, and fully intended to preserve this right, without any cost or charge made by the Bureau.

9. Paragraph 7 of the Amendatory Contract, wherein it is stated as follows:

> "The District's right to project water for irrigation uses shall be protected, conserved and administered first in right as against other uses, and such right shall not be impaired by the operation by the United States of any power producing facilities now or hereafter constructed..."

supposedly protected the Irrigation District as to its silt run and from the time the Amendatory Contract was executed until the summer of 1959, silt was released from Guernsey Reservoir when needed, and no claim for lost power revenue was ever made by the Bureau or in any way asserted against the Irrigation District.

10. If Affiant or any member of the Board of Directors of the Gering-Fort Laramie Irrigation District or any farmer under the project would have had any idea that the Bureau of Reclamation would subsequently attempt to levy a power interruption charge on the Irrigation District for the silt run, the Irrigation District and its landowners would never have approved the Amendatory Contract.

11. Affiant states firmly that it was never the intent of either of the parties to the Amendatory Contract, at the time it was entered into, to levy a power interruption charge against the Irrigation District for the silt run and such power interruption charge was apparently an after thought by someone in the Bureau of Reclamation and is grossly unfair and unjust to the Irrigation District and its landowners.

12. Affiant remembers and verifies from his own recollection that the Board of Directors of Gering-Fort Laramie Irrigation District was

advised by Bureau of Reclamation officials, in negotiating the Amendatory Contract, of September 22, 1952, that its silt run would in no way be affected.

DATED this 23rd day of August, 1982.

Harold Ledingham
Harold Ledingham

Subscribed in my presence and sworn to before me this 23rd day of August, 1982.

GENERAL NOTARY - State of Nebraska
DIANN CHADWICK
My Comm. Exp. Mar. 24, 1985

Diann Chadwick
Notary Public

My Commission expires: March 24, 1985

STATEMENT OF I. J. MATTHEWS, FORMER DISTRICT MANAGER, CASPER OFFICE, BUREAU OF RECLAMATION

On October 1, 1945, I became District Manager of the North Platte Project for the Bureau of Reclamation. Subject to my superiors, I had jurisdiction of the operation of Guernser Reservoir. The construction and operation of Guernsey Reservoir caused a desilting of the river water by reason of silt being trapped in the reservoir. The water which was discharged from the reservoir consequently contained substantially less silt than the river water contained before the construction and operation of the reservoir. This resulted in clearer water which did not have the sealing effec of the silty water. Carriage losses in the distribution systems of the project districts increased substantially and sloughing of the banks of their distribution systems increased. In 1946 silt was released by surging the reservoir. When the water level in the reservoir was lowered to an effective point, the release of silt could be accomplished. This practice was also followed in 1949 and 1950. In 1947 and 1948 it was not necessary to release silt becaus of the heavy rainfall from April 1 to October 1. This enabled the Districts to carry less water in the canals, which left the banks less exposed to erosion. The runoff from the heavy rainfall also contributed silt to the canals and laterals. Under the circumstanc releases of silt in 1947 and 1948 were not necessary.

The practice of releasing silt by surging the reservoir was also followed in 1951, 1952, 1953, 1954, 1956 and 1957. Silt was not released in 1955 because there was sufficient silt in the distribution systems due to floods, and silt was not released in 1958 because the late irrigation demands were too great to permit a drawdown.

The release of silt was made at the request of the project districts. The Bureau recognized that the release of silt was necessary to protect the distribution systems against sloughing and to conserve water by guarding against increased carriage losses.

During the negotiations leading up to the execution of the amendatory contracts between the United States and Goshen, Pathfinder and Gering-Ft. Laramie, whereby they relinquished their interests in power revenues, the question of releasing silt from Guernsey Reservoir was given consideration. The Bureau proposed to operate Guernsey Reservoir in a manner which would give due consideration to the release of silt, and, as a matter of fact, it was understood by the Bureau and the project districts that silt releases would be made from the reservoir at least three times annually for a week duration each. At no time during the period that I was District Manager, which was from Oct. 1, ~~[illegible] or~~ 1945 to December 31, 1958, was the practice of releasing silt from the reservoir ever questioned by the Bureau.

On March 4, 1953, Mr. Batson, Regional Director, Mr. Starr, District Engineer, Mr. Nelson, District Superintendent of Water and Land, Mr. Roush, Operations and Maintenance Supervisor, and I met with representatives of Pathfinder at Mitchell, Nebraska, and, among other things, the question of the release of silt from Guernsey Reservoir was discussed. It was recognized that the release of silt into the Interstate Canal from the reservoir reduced carriage losses in the canal and lateral system, and it was concluded that the Bureau would make every effort to continue the operation in the future.

In the discussions which took place with the project districts before the construction of Glendo Reservoir was approved, the question of silt was also discussed. The substance of these discussions was that by operating Glendo Reservoir in conjunction with Guernsey Reservoir silt releases could be more easily accomplished.

At no time during the period that I was District Manager was the loss of power revenues at Guernsey due to the release of silt ever mentioned or considered as a proper charge to be made against the project districts.

AFFIDAVIT

STATE OF WYOMING)
) ss
COUNTY OF GOSHEN)

The undersigned, being first duly sworn states as follows:

That he is a professional engineer and was employed by the United States Bureau of Reclamation for 33 years of which ten years was in construction of Dams and Canals; and from 1951 until 1961 as Chief of Irrigation Operations Branch in the Irrigation Division of the North Platte Project located at Guernsey, Wyoming and he served his last 11 years as Chief of Water and Lands Operation Division of the North Platte Project, located in Casper, Wyoming, having retired in the year 1974.

The affiant acting for and in behalf of the Bureau of Reclamation and acting on orders from I. J. Matthews, Project Manager for the Bureau of Reclamation, of Casper, Wyoming, in the year 1953, on more than two occasions promised the four irrigation districts (Goshen Irrigation District, Gering-Ft. Laramie Irrigation District, Pathfinder Irrigation District and Northport Irrigation District) that they could have three silt runs, every year, if they desired, out of Guernsey Reservoir without any power interruption charges, in exchange for them not contesting the Bureau's planned construction of Glendo Reservoir at Glendo, Wyoming.

At this particular time, in the year 1953, a broken bull ring occured in one of the outflow valves in the South tunnel of Pathfinder Dam and in order to replace it, it was estimated it would cost the Districts in excess of $250,000 and Pathfinder Reservoir would have to be drained to permit the replacement and with the loss of such storage it would make it extremely doubtful if an adequate supply of water would be available for the next irrigation season, and if such water was not available the farmers under the Districts could sustain a severe crop loss. But with the construction of Glendo Reservoir, it was anticipated we could get along without this particular release tunnel, which was plugged with concrete at no cost to the Districts, and this was also included in our negotations with the Irrigation Districts, in which the Bureau agreed not to assess power interruption charges against the Districts for the requested silt runs.

Because of the promises made by the Bureau of Reclamation to permit at least three draw downs at Guernsey Reservoir in any year without a power interruption charge, representatives of Farmers Irrigation District, Mitchell Irrigation District and Pathfinder Irrigation, went to Washington, D.C. to loby for the authorization of the construction of Glendo Reservoir, thereby assisting the Bureau of Reclamation in accomplishing it's desired objectives.

In affiant's opinion, the promises made by the Bureau of Reclamation to the Irrigation Districts were made in good faith and for the Bureau of Reclamation to now renege on its promises would be highly unethical, and unjust.

FURTHER AFFIANT SAYETH NOT.

Peter F. Anker
Peter F. Anker

Subscribed in my presence and sworn to before me this 9th day of September, 1982.

Bob C. Sigler
Notary Public

My Commission Expires: June 15, 1983

AFFIDAVIT

STATE OF WYOMING)
) ss
COUNTY OF GOSHEN)

The undersigned, being first duly sworn, states as follows:

That I was employed for 28 years by the Bureau of Reclamation, 25 years of which I spent in the Irrigation Division and am now retired. I served 12 years as Chief of Irrigation Operations Branch and my duties included planning, operating and directing all activities for the proper operation and maintenance of the North Platte Irrigation system program involving the 4 Reclamation districts, 8 Warren Act Districts, 8 Glendo Contract Districts and numerous individual water users. I directed the allocation and administration of storage water to the various districts. I directed the flows of the North Platte River into the various irrigation canals and water releases from Guernsey Reservoir; and dealt with Irrigation District Managers and Boards relative to sound management of their irrigation systems.

The affiant acting for and on behalf of the Bureau of Reclamation and acting on orders from I. J. Matthews, Engineer of Casper, Wyoming, in the year 1954 on more than two occasions promised the four districts (Goshen Irrigation District, Gering-Ft. Laramie Irrigation District, Pathfinder Irrigation District and Northport Irrigation District) that they could have as many silt runs as they desired out of Guernsey without any power interruption charges in exchange for them not contesting the Bureau's planned construction of Glendo Reservoir at Glendo, Wyoming.

At this particular time, a bull ring failed in the South release tunnel of Pathfinder dam and in order to recover it in the middle of the Reservoir, it was estimated it would cost the irrigation districts in excess of $250,000 and because the reservoir would have to be drained to permit the repairs during a critical time of the irrigation season, it was estimated that the irrigators would have severe crop loss and with the construction of Glendo, it was anticipated we could get along without this particular release tunnel and this was also included in our negotiations with the irrigation districts concerning power interruption charges.

Because of the promises made by the Bureau of Reclamation to permit as many drawdowns, as needed, in any year without a power charge, representatives of the irrigation districts went to Washington, D. C. to lobby for the construction of Glendo Reservoir, assisting the Bureau of Reclamation in accomplishing its desired objectives.

In affiant's opinion, the promises made by the Bureau of Reclamation to the irrigation districts were made in good faith and for the Bureau of Reclamation to now renege on its promises would be highly unethical and unjust.

Further Affiant sayeth not.

Gordon L. Cruse

Subscribed in my presence and sworn to before me this 12th day of October, 1982.

Notary Public

My Commission expires June 15, 1983.

SUPPLEMENTAL

AFFIDAVIT

STATE OF WYOMING)
) ss
COUNTY OF GOSHEN)

The undersigned, being first duly sworn, states as follows:

This is a Supplemental Affidavit, supplementing the information contained in my Affidavit of October 1, 1982, regarding power interruption charges by the Bureau of Reclamation to Goshen Irrigation District, Gering-Ft. Laramie Irrigation District, Pathfinder Irrigation District and Northport Irrigation District for silt runs.

Affiant, a former employee of the Bureau of Reclamation and former chief of Irrigation Operations Branch for the Bureau of Reclamation, was employed by the Bureau of Reclamation prior to and at the time Glendo Dam and Reservoir was constructed and placed in operation in 1957, of his own knowledge, knows that the United States Bureau of Reclamation actively urged the Irrigation Districts to support the construction of Glendo Dam, Reservoir and Power Plant. Some of the Irrigation Districts involved were not in favor of the Glendo Project and were instrumental in holding up Congressional approval and allocation of money for the Glendo Project. Support by the Irrigation Districts was believed necessary by the Bureau of Reclamation, in order to gain Congressional approval and allocation of funds for the Glendo Project.

The affiant, acting for and on behalf of the Bureau of Reclamation, and acting on orders from I. J. Matthews, Engineer of Casper, Wyoming, in the year 1954, on more than two occasions promised the four districts (Goshen Irrigation District, Gering-Ft. Laramie Irrigation District, Pathfinder Irrigation District and Northport Irrigation District) that they could have as many silt runs as they desired out of Guernsey without any power interruption charges in exchange for them not contesting the Bureau's planned construction of Glendo Reservoir at Glendo, Wyoming. Because of the promises made by the Bureau of Reclamation to permit as many drawdowns at Guernsey (silt runs out of Guernsey) as needed or requested by the Irrigation Districts, without any power interruption charges; representatives of the Irrigation Districts went to Washington, D. C., to lobby for the construction of the Glendo Project, assisting the Bureau of Reclamation in accomplishing its desired objectives.

Glendo Reservoir, after its construction, traps most of the silt that previously went into Guernsey Reservoir. Prior to the Construction of the Glendo facilities, Guernsey Reservoir was accumulating sediment at a rate of approximately 1,000 acre feet per year. Assuming that Glendo was not built, Guernsey storage capacity would have been depleted to 18,000 acre feet in 1982. The power head would have been lowered considerably as sediments built up in the Reservoir. Further projections would place the storage capacity at zero in the year 2,000, only 17 years from now. Of course, operation of the power plant would have ceased many years prior to that date because of a limited head of water, and the silt intake into the power units. The power plant needs a good reservoir capacity to provide a sufficient head of water for operation and the water cannot be too silty because it would cause damage to the power unit and put it out of operation.

Guernsey's Reservoir capacity, at this time, is approximately 45,300 A.F. Guernsey's Reservoir capacity, without the construction of Glendo Reservoir (which now catches and holds most of the silt) would be 18,000 A.F.

Affiant firmly believes that it is morally and ethically wrong and completely unjust that the Irrigation Districts should be billed for power losses, when, indeed their support of the construction of the Glendo facilities was a prime factor in its being built, thus preserving the future of the Guernsey Reservoir and power plant. Actually, since Glendo was completed, Guernsey storage capacity has increased. The silt runs from Guernsey since the construction of glendo Reservoir, have removed more silt than the silt load which flows into Guernsey Reservoir.

Further Affiant sayeth not.

Gordon L. Cruse

Subscribed in my presence and sworn to before me this 11th day of January, 1983.

Ilene Y. Kaufman
Notary Public

My Commission expires December 9, 1985.

KENTUCKY WATER RESOURCE DEVELOPMENT PROJECTS

PREPARED STATEMENTS

Senator JOHNSTON. Now, before we recess, I understand that because of a scheduling conflict, the witnesses testifying on Kentucky projects will not be able to present oral testimony this morning—these include the Kentucky Rivers Coalition and the Beech Fork Preservation Association.

The subcommittee has received prepared statements from Congressmen Natcher, Hubbard, Hopkins, and Mazzoli, which cover projects of special interest to them. Also, I believe Congressman Perkins and several of his constituents could have statements for the record.

Without objection, these statements will be made part of the record at this point.

[The statements follow:]

STATEMENT OF REPRESENTATIVE ROMANO L. MAZZOLI OF KENTUCKY

MR. CHAIRMAN AND DISTINGUISHED MEMBERS OF THE SUBCOMMITTEE,

I THANK YOU FOR ALLOWING ME THE OPPORTUNITY TO PRESENT TESTIMONY IN BEHALF OF TWO IMPORTANT ENERGY AND WATER DEVELOPMENT PROJECTS IN THE THIRD CONGRESSIONAL DISTRICT OF KENTUCKY.

I EXTEND SPECIAL THANKS TO SENATOR WALTER "DEE" HUDDLESTON FOR ARRANGING THIS TIME FOR THE KENTUCKY DELEGATION.

THE SOUTHWEST JEFFERSON COUNTY FLOOD PROTECTION PROJECT -- WHICH CONSISTS OF A SERIES OF EARTH LEVEES, CONCRETE FLOODWAYS AND PUMPING PLANTS -- IS DESIGNED TO PROTECT NEARLY 60,000 RESIDENTS, TWO INDUSTRIAL SITES AND SEVERAL HUNDRED COMMERCIAL UNITS IN THE AREA FROM THE FLOODING WHICH OCCURS ON ALMOST AN ANNUAL BASIS. OVER THE LAST 100 YEARS, RESIDENTS IN THE AREA OF JEFFERSON COUNTY IN THE SOUTHWEST HAVE BEEN VICTIMIZED BY OHIO RIVER FLOODS AT LEAST 75 TIMES.

MR. CHAIRMAN, LOCAL AUTHORITIES HAVE RAISED NEARLY 25% OF THE FUNDS FOR THIS PROJECT. THIS, I BELIEVE, DEMONSTRATES A STRONG LOCAL COMMITMENT FOR THE PROGRAM.

AND, THE UNANIMOUS ENDORSEMENT THIS PROJECT HAS RECEIVED OVER THE YEARS FROM OUR DELEGATION IN THE CONGRESS IS, I THINK, A FURTHER DEMONSTRATION OF THE COMMITMENT AND THE WORTHINESS OF THIS PROJECT.

THE FULL $6 MILLION RECOMMENDED BY THE ADMINISTRATION FOR FISCAL YEAR 1984 IS ESSENTIAL FOR TIMELY COMPLETION OF THIS PROJECT. WITH THE APPROVAL OF THESE FUNDS, APPROXIMATELY 61% OF THE FEDERAL FUNDING REQUIRED FOR THE SOUTHWEST JEFFERSON COUNTY FLOOD CONTROL PROJECT WILL HAVE BEEN APPROPRIATED.

IN SUM, MR. CHAIRMAN, THE SOUTHWEST JEFFERSON COUNTY FLOOD PROTECTION PROJECT, IN MY JUDGMENT, MERITS CONTINUED SUPPORT FROM YOUR DISTINGUISHED SUBCOMMITTEE, AND I HOPE THAT YOU CAN RECOMMEND FULL FUNDING FOR THE PROJECT.

IN ADDITION, MR. CHAIRMAN, I WOULD LIKE TO EXPRESS MY SUPPORT FOR AN APPROPRIATION TO CARRY OUT LEGISLATION TO PROTECT THE FALLS OF THE OHIO.

THE FALLS OF THE OHIO IS THE FORMAL NAME FOR THE FORMER RAPIDS JUST BELOW THE MC ALPINE DAM ON THE OHIO RIVER IN JEFFERSON COUNTY, KENTUCKY, AND BORDERING ON FLOYD AND CLARK COUNTIES, INDIANA.

THE FALLS OF THE OHIO IS THE ONLY PLACE WHERE THE OHIO RIVER FLOWS OVER BARE BEDROCK AND IS A WORLD-RENOWN, 300-MILLION YEAR-OLD FOSSILIZED CORAL REEF. SINCE 1966 THE FALLS HAS BEEN A NATIONAL NATURAL LANDMARK, INDICATING THE SIGNIFICANCE OF THE AREA TO GEOLOGISTS IN THE PAST 100 YEARS. ALSO ATTRACTED TO THE AREA BECAUSE OF THE FALLS IS AN UNUSUAL ARRAY OF WILDLIFE.

BUT, OVER THE YEARS THE CORAL REEF HAS BEEN VANDALIZED BY SOUVENIR HUNTERS, AND SECTIONS OF THE SURROUNDING BANKS HAVE BEEN TURNED INTO DUMPING SITES.

LAST CONGRESS, THE PRESIDENT SIGNED INTO LAW AN AUTHORIZATION OF SOME $300,000 TO INITIATE THE ESTABLISHMENT OF THE FALLS OF THE OHIO NATIONAL WILDLIFE CONSERVATION AREA. I COMMEND THE INITIATIVE OF MY DISTINGUISHED COLLEAGUE IN THE HOUSE, GENE SNYDER, IN SPEARHEADING THIS VITAL LEGISLATION TO PROTECT AND PRESERVE THE FALLS.

THE NEED FOR PRESERVING THE AREA IS GREATER NOW THAN EVER BEFORE. FURTHER DETERIORATION WILL TAKE PLACE IF WE DO NOT TAKE CONCRETE STEPS NOW TO PRESERVE THE FALLS FOR OUR OWN ENJOYMENT AND THAT OF FUTURE GENERATIONS.

IT IS FOR THIS REASON, MR. CHAIRMAN, THAT I URGE FUNDING OF THE FULL $300,000 FOR THE FALLS OF THE OHIO NATIONAL WILDLIFE CONSERVATION AREA.

I THANK YOU, AGAIN, MR. CHAIRMAN AND YOUR ABLE SUBCOMMITTEE, FOR ALLOWING ME THE OPPORTUNITY TO SPEAK OUT FOR THESE TWO IMPORTANT PROJECTS.

STATEMENT OF REPRESENTATIVE CARROLL HUBBARD, JR., OF KENTUCKY

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT, THANK YOU FOR GRANTING ME THIS OPPORTUNITY TO COMMENT IN BEHALF OF WATER PROJECTS IN OR DIRECTLY AFFECTING MY FIRST CONGRESSIONAL DISTRICT OF KENTUCKY.

FIRST, I WOULD LIKE TO ADD MY SUPPORT TO SEVERAL OF THE ITEMS LISTED IN THE JANUARY, 1983, U. S. ARMY CORPS OF ENGINEERS' CIVIL WORKS BUDGET REQUEST FOR FY 1984, AS FOLLOWS:

-- $3,825,000 FOR OPERATION AND MAINTENANCE OF BARKLEY DAM ON LAKE BARKLEY, KENTUCKY. THESE FUNDS WOULD BE USED FOR SURVEYING AND MARKING PROPERTY LINES ON LAKE BARKLEY, PAINTING THE SPILLWAY GATES AND DREDGING THE NAVIGATION CHANNEL, AND FOR OTHER PURPOSES. FUNDS WOULD ALSO BE USED FOR NORMAL OPERATION AND MAINTENANCE OF THE DAM AND POWER PLANT AT LAKE BARKLEY. IN VIEW OF THE RECREATIONAL AND OTHER VALUES OF LAKE BARKLEY FOR MY CONSTITUENTS, I RECOMMEND THAT FUNDING FOR THIS VERY IMPORTANT PROJECT BE APPROVED.

-- $150,000 FOR SURVEYS AND $1,276,000 FOR OPERATION AND MAINTENANCE OF THE GREEN AND BARREN RIVERS, KENTUCKY AND TENNESSEE. THE SURVEY FUNDS WOULD BE USED TO COMPLETE A REPORT ON GREEN RIVER LAKE HYDROPOWER, COMPLETE RECONNAISSANCE STUDIES AT NOLIN LAKE AS WELL AS INITIATE FEASIBILITY LEVEL STUDIES AND CONTINUE RECONNAISSANCE LEVEL STUDIES FOR SYSTEM OPTIMIZATION. THE $1,276,000 OPERATION AND MAINTENANCE FUNDS WOULD BE USED FOR THE BASIC OPERATION OF TWO LOCKS AND 109 MILES OF CHANNEL MAINTENANCE AND REPAIR TO LOCK GATES AT LOCK 1.

-- $820,000 FOR SMITHLAND LOCKS AND DAM WOULD BE USED FOR REAL ESTATE ADMINISTRATION, ACQUISITION OF RECREATION LANDS, AND CONTINUATION OF CONSTRUCTION OF ONE RECREATION SITE. THIS AFFECTS ILLINOIS, INDIANA, AND KENTUCKY.

- $1,029,000 FOR REHABILITATION CONSTRUCTION WORK ON LOCKS AND DAM 52, ILLINOIS AND KENTUCKY. FUNDS WOULD BE USED FOR INSTALLATION OF MACHINERY FOR THE LOCKS AND WICKET ASSEMBLIES FOR THE DAM AS WELL AS FOR COMPLETION OF THE MITER GATES.
- $500,000 FOR REHABILITATION CONSTRUCTION WORK ON LOCKS AND DAM 53, ILLINOIS AND KENTUCKY. THESE FUNDS WOULD BE USED FOR INSTALLATION OF MITER GATES AND MACHINERY FOR THE LOCKS, AND COMPLETION OF THE WICKET ASSEMBLIES FOR THE DAM. THE FUNDS WOULD ALSO PROVIDE FOR CONTINUATION OF REPAIR OF THE DAM BEARTRAPS WITH ANTICIPATED COMPLETION IN FY 85.
- $8,210,000 FOR OPERATION AND MAINTENANCE OF THE OHIO RIVER OPEN CHANNEL WORK IN KENTUCKY.
- $30,177,000 FOR CONSTRUCTION AND $12,053,000 FOR OPERATION AND MAINTENANCE FOR THE OHIO RIVER LOCKS AND DAMS, KENTUCKY.
- $320,000 TO CONTINUE A STUDY OF MAYFIELD CREEK AND TRIBUTARIES, KENTUCKY. MAYFIELD CREEK IS 56 MILES IN LENGTH AND THE DRAINAGE BASIN COVERS APPROXIMATELY 440,000 SQUARE MILES. THE FUNDS WOULD BE USED TO CONTINUE A PREVIOUS STUDY AND CONSIDER ALTERNATIVES FOR DEVELOPING A COMPREHENSIVE PLAN FOR FLOOD CONTROL AND DRAINAGE IN THE ENTIRE MAYFIELD CREEK BASIN AREA.
- $300,000 FOR OPERATION AND MAINTENANCE OF HICKMAN HARBOR, KENTUCKY. THESE FUNDS WOULD BE USED TO MAINTAIN THE HARBOR AND THE NAVIGATION CHANNEL FOR HICKMAN HARBOR.

IN ADDITION TO THE PROJECTS MENTIONED ABOVE WHICH ARE OF SPECIAL IMPORTANCE TO MY FIRST CONGRESSIONAL DISTRICT OF KENTUCKY, I WOULD LIKE TO ADD MY SUPPORT TO ALL PROJECTS RELATED TO MAINTENANCE AND IMPROVEMENT OF THE OHIO RIVER, THE CUMBERLAND-TENNESSEE RIVERS, AND LAKE BARKLEY, AS WELL AS TO ALL OF THE WATER PROJECTS WHICH HAVE BEEN DEVELOPED BY THE U. S. ARMY CORPS OF ENGINEERS FOR THE COMMONWEALTH OF KENTUCKY. WATER RESOURCES ARE EXTREMELY IMPORTANT TO THE RESIDENTS OF KENTUCKY AND ESPECIALLY TO MY CON-

STITUENTS IN WESTERN KENTUCKY. ALL OF THE WATER RESOURCES IN THE AREA PROVIDE A VITAL LINK FOR COMMERCE AND TOURISM AS WELL AS FOR THE GENERAL ENRICHMENT OF THE QUALITY OF LIFE FOR RESIDENTS AND VISITORS. THEREFORE, I AM PLEASED TO ENDORSE THE U. S. ARMY CORPS OF ENGINEERS' PROPOSED FUNDING FOR ALL OF KENTUCKY'S WATER PROJECTS.

FURTHER, I WOULD LIKE TO TAKE THIS OPPORTUNITY TO ADD MY SUPPORT FOR THE $628,000 SPECIAL STUDY OF THE TENNESSEE-TOMBIGBEE WATERWAY. THE TENN-TOM WATERWAY IS ALSO OF MAJOR IMPORTANCE TO MY CONSTITUENTS WHO ARE SEEKING NEW TRADE ROUTES AND SHORTENED DISTANCES TO THE GULF OF MEXICO FROM THE UPPER MISSISSIPPI RIVER AND THE OHIO RIVER. THESE FUNDS WOULD BE USED TO STUDY WATER SUPPLIES, NAVIGATION NEEDS, AND WATER QUALITY, AMONG OTHER MATTERS, ON THE RIVER SYSTEMS WHICH MIGHT BE IMPACTED BY THE TENNESSEE-TOMBIGBEE WATERWAY PROJECT. EIGHT COUNTIES IN KENTUCKY, MOST OF WHICH ARE WITHIN MY CONGRESSIONAL DISTRICT, WOULD BE INCLUDED IN THIS PROPOSED STUDY.

AT THIS TIME I WOULD ALSO LIKE TO CALL TO THE ATTENTION OF THE SUBCOMMITTEE SEVERAL SMALL PROJECTS FOR WHICH FUNDING HAS NOT BEEN REQUESTED FOR FY 1984. NEVERTHELESS, I WOULD HOPE THAT THESE PROJECTS MIGHT RECEIVE FUNDING IN FY 84 FOR WORK BY THE U. S. ARMY CORPS OF ENGINEERS. I WOULD LIKE TO RENEW MY PREVIOUS REQUEST THAT THE U. S. ARMY CORPS OF ENGINEERS BE DIRECTED TO PROVIDE ALL POSSIBLE ASSISTANCE TO THE LYON COUNTY PUBLIC RIVER PORT, KENTUCKY, FOR NECESSARY AND NEEDED PORT DEVELOPMENT AND EXPANSION. THIS PORT WOULD BE THE GATEWAY TO THE NORTH WHEN THE TENNESSEE-TOMBIGBEE WATERWAY PROJECT IS COMPLETED. IT IS AN ICE FREE, SLACKWATER PORT, OPEN TO BARGE TRAFFIC 365 DAYS PER YEAR AND SHOULD BE DEVELOPED FOR GENERAL USAGE AS WELL AS TO IMPROVE THE ECONOMY IN THE IMMEDIATE AREA. I THEREFORE URGE FUNDING IN THE AMOUNT OF $50,000 IN FY 84 FOR A SECTION 107 STUDY UNDER THE CORPS' CONTINUING AUTHORITIES PROGRAM OF THE LYON COUNTY PUBLIC RIVER PORT, KENTUCKY. IN ADDITION, I HAVE RECEIVED RECENT

REPORTS OF FLOODING ALONG THE ROUGH RIVER IN OHIO COUNTY, KENTUCKY, WHICH HAS CAUSED DAMAGE TO FERTILE FARMLAND ALONG THE DRAINAGE BASIN. THEREFORE, I REQUEST THAT $50,000 BE ADDED TO THE REQUESTED $150,000 FOR SURVEYS OF THE GREEN AND BARREN RIVERS, KENTUCKY AND TENNESSEE, FOR THE PURPOSE OF CONDUCTING A NAVIGATION STUDY OF THE ROUGH RIVER IN OHIO COUNTY, KENTUCKY. THE ROUGH RIVER DRAINS INTO THE GREEN RIVER AND IS PART OF THE SAME DRAINAGE BASIN. LASTLY, FLOODING OVER THE PAST FIVE YEARS IN THE BASIN OF THE TRADEWATER RIVER, KENTUCKY, HAS BEEN MORE FREQUENT THAN WOULD BE NORMALLY EXPECTED. THE ARMY CORPS OF ENGINEERS HAS AUTHORIZATION FOR A FLOOD-CONTROL STUDY ALONG THE TRADEWATER RIVER, BUT FUNDS HAVE NOT BEEN APPROPRIATED FOR THIS PURPOSE. I THEREFORE REQUEST THAT $50,000 BE APPROPRIATED FOR A STUDY OF THE LOWER REACHES OF THE TRADEWATER RIVER FORM BLACKFORD AND DAWSON SPRINGS, KENTUCKY, TO THE PLACE WHERE THE TRADEWATER RIVER CONVERGES WITH THE OHIO RIVER, TO ASSESS DAMAGE CAUSED BY THE CONSTRUCTION OF THE SMITHLAND DAM AND ITS EFFECT ON THE LOWER END OF THE TRADEWATER RIVER. THIS COVERS APPROXIMATELY TWENTY OF THE NINETY MILES OF THE TRADEWATER RIVER.

THANK YOU FOR YOUR CONSIDERATION OF MY COMMENTS AND REQUESTS FOR FUNDING FOR THE PROJECTS TO WHICH I HAVE REFERRED.

STATEMENT OF REPRESENTATIVE LARRY J. HOPKINS OF KENTUCKY

Dear Mr. Chairman:

Thank you for this opportunity to present written testimony to the Subcommittee on Energy and Water Development today in support of funding for Corps of Engineers projects in the 6th District of Kentucky.

Over the past four years I have requested funds to operate and maintain Kentucky River locks 5,6,8,9 and 10. Efforts to keep the locks open have been successful even though the Corps announced its intention to close the locks in 1980. I urged this Subcommittee to appropriate money to keep the locks open contrary to the Corps recommendation pending the release of a report on the effects of closing the locks. This report has now been released and it recommends that the Corps turn the locks over to state, local or private interests.

The release of the report by the Corps of Engineers occurred between sessions of the Kentucky Legislature, which only meets in even-numbered years. For this reason I must plead with the Subcommittee for a special, non-recurring appropriation of funds for an orderly and prudent transition of the Kentucky River locks to state or local governments.

I met recently with Corps officials and members of the Legislative Research Commission's Kentucky River Task Force to discuss the report and the future of the locks. To facilitate the transfer of the locks from federal control, I ask the Subcommittee to approve and include in its Fiscal 1984 appropriation $320,000 to repair the locks prior to turning them over to state or local governments. This sum is broken down as follows:

Lock #5 -- $40,000 to repair timber on miter gate leaves
Lock #6 -- $50,000 to repair holes in apron of dam
Lock #7 -- $200,000 to repair lower miter gate leaves
Lock #8 -- $30,000 to repair timbers on miter gate leaves.

Expenditure of these funds, of course, would be conditional on a final agreement between the Corps and state or local governments for the continued operation and maintenance of the facilities.

Of primary importance is line-item funding to continue the present caretaker status of the facilities in the next fiscal year. The Corps has estimated that $57,600 will be required for what is actually an investment in minimum maintenance for locks 5 through 10.

Thank you for your time and cooperation with this request. I look forward to our continued work on Corps of Engineers projects in the 6th District of Kentucky.

Statement of Representative William H. Natcher of Kentucky

MR. CHAIRMAN, AGAIN, WE WANT YOU TO KNOW THAT WE APPRECIATE THE OPPORTUNITY TO APPEAR AT THIS TIME IN BEHALF OF THE PROJECTS FOR KENTUCKY. KENTUCKY HAS MORE MILES OF NAVIGABLE STREAMS THAN ANY OTHER STATE IN OUR ENTIRE COUNTRY, WITH THE EXCEPTION OF ONE. ALL DOWN THROUGH THE YEARS, WE HAVE SUFFERED DAMAGES FROM FLOODS AND LOSS OF LIFE.

IN THE BUDGET FOR FISCAL YEAR 1984, WE HAVE $4,400,000 TO COMPLETE CONSTRUCTION OF THE TAYLORSVILLE LAKE PROJECT WHICH IS LOCATED ON THE SALT RIVER ABOUT 60 MILES UPSTREAM FROM ITS CONFLUENCE WITH THE OHIO RIVER. THIS PROJECT IS LOCATED IN SPENCER COUNTY, KENTUCKY IN THE SECOND CONGRESSIONAL DISTRICT AND IS ABOUT 3 MILES EAST OF THE TOWN OF TAYLORSVILLE, KENTUCKY AND SOME 26 MILES SOUTHEAST OF THE CITY OF LOUISVILLE. THE LAKE AREA LIES IN SPENCER, ANDERSON AND NELSON COUNTIES AND WAS AUTHORIZED BY THE 1966 FLOOD CONTROL ACT. THE BENEFIT COST RATIO FOR THIS PROJECT IS 2.1 TO 1.

IN ADDITION TO THE CONSTRUCTION AMOUNT, THE BUDGET FOR FISCAL YEAR 1984 CONTAINS THE SUM OF $375,000 FOR OPERATION AND MAINTENANCE OF THIS PROJECT.

MR. CHAIRMAN, I RESPECTFULLY REQUEST THAT THE TWO AMOUNTS SET FORTH FOR THE TAYLORSVILLE LAKE PROJECT BE APPROVED FOR FISCAL YEAR 1984.

IN THE BUDGET FOR FISCAL YEAR 1984, WE HAVE $150,000 TO BE USED FOR A SURVEY OF GREEN AND BARREN RIVERS. THE TOTAL ESTIMATED FEDERAL COST OF THE SURVEY STUDY FOR THIS PROJECT IS $1,158,000. MR. CHAIRMAN, I RESPECTFULLY REQUEST THAT THE SUM OF $150,000 CARRIED IN THE BUDGET FOR THE GREEN AND BARREN RIVER STUDY BE APPROVED.

IN THE BUDGET FOR FISCAL YEAR 1982, WE HAD THE SUM OF $460,000 TO BE USED TO CONTINUE THE STUDIES ON THE CAMPGROUND LAKE PROJECT IN THE SECOND CONGRESSIONAL DISTRICT OF KENTUCKY. SOME $830,000 HAD BEEN APPROVED FOR THIS PROJECT PRIOR TO THE AMOUNT CONTAINED IN THE

1982 Fiscal Year Budget. Mr. Chairman, this is a good Project but so far, the State of Kentucky has failed to join with the Corps of Engineers on the requirements concerning recreation and additional use of water storage; therefore, the Corps of Engineers has made no request for additional funds for this Project for Fiscal Year 1984.

MR. CHAIRMAN, I join with all of my colleagues from Kentucky in the House and in the Senate in their requests for our State and their Districts. Again, I want you to know that I appreciate the opportunity to appear at this time in behalf of the Taylorsville Lake Project and Green and Barren River Study and the Campground Lake Project.

I want to thank you and the members of this Committee for your support and assistance all down through the years.

STATEMENT OF JOE BODINE, PRESIDENT, BEECH FORK PRESERVATION ASSOCIATION

On behalf of the Beech Fork Preservation Association, I am submitting this testimony to the Congressional Appropriations Subcommittees on Energy and Water Resources Development. Representatives from the Association have testified in person to these committees for several years in opposition to the Camp Ground Lake which the Army Corps of Engineers has proposed to build in Washington, Nelson, and Anderson Counties in Kentucky.

We are pleased that there are no appropriations in the FY 84 budget for Camp Ground. This is a sound decision, since project construction would be a waste of taxpayers' money.

The Corps has conducted studies of this project which should have been disclosed some time ago. We are requesting that the Corps discontinue study and that the project be placed on the inactive list.

Camp Ground Lake would inundate 18,500 acres of land, most of which is now productive cropland for family farms. At a time in the nation's history when farmers are facing severe financial difficulties and a diminishing cropland base is a matter of widespread concern, priority should be placed on these more than 100 families who contribute to the area's agricultural community.

The Kentucky Department of Parks suggested in 1980 that Camp Ground Lake be considered for deauthorization, stating that cost-sharing for recreational purposes would not be provided by the state. The Commonwealth is currently having trouble finding financial interest in funding basic recreational development at the recently completed Taylorsville Lake, which is less than 20 miles north of the proposed dam site and closer to the urban area of Louisville.

The Kentucky Department for Natural Resources and Environmental Protection stated in 1980 that Commonwealth participation in the water supply aspects of the project could not be expected.

It is our belief that the Corps is refraining from publishing the results of studies because they show negative benefits of project construction, and we find this irresponsible because of the effect on the communities involved.

By leaving the downstream areas in limbo, the Corps engenders a lack of interest in appropriate flood control measures: participation in the flood insurance program and constrruction of small-scale protection projects. It would be best for any existing Camp Ground funds to be routed to these protective measures. At present, continued discussion about the project only hampers positive action to protect the area's flood- prone communities.

The Beech Fork Preservation Association requests that the Corps be instructed to termiate study and publish the findings as they are, that any remaining funds be reallocated to non-structural flood control measures, and that the Camp Ground Lake be placed on the inactive list and considered for deauthorization in due time.

Thank you for the opportunity to present our view to the Committee.

STATEMENT OF WILLIAM H. BATTE, CHAIRMAN OF THE BOARD, KENTUCKY RIVERS COALITION

The Kentucky Rivers Coalition, representing the interests of 19 member groups and several hundred members-at-large, presents this written statement as testimony to the Committee. The member groups of the Coalition are landowner, civic, and recreational groups concerned with the proper development of Kentucky's natural resources, for the benefit of all Kentuckians.

CAMP GROUND LAKE

The Kentucky Rivers Coalition asks you to consider requesting the Corps to declare the Camp Ground Lake project "inactive." This project has received no funding for two years, and is to receive none this year. This is because the economics of the project are unfavorable.

The Kentucky Department of Parks is not interested in the project's recreational purposes, and the Louisville water company's once remote interest in part of the water storage capabilities has disappeared. The economic support for the project is insufficient to warrant continued study.

Additionally, the "pending" nature of the project hinders the responsible action which the local community should be taking towards smaller, more appropriate flood control and water supply needs. The Corps is refraining from finishing the report which would show that the project is infeasible, hoping that state cost-sharing will materialize. It is irresponsible for the Corps to leave this community in limbo. There is no indication that the project is needed.

The Kentucky Rivers Coalition strongly urges the Committee to direct that expenditures on future studies for Camp Ground be discontinued and that the project be declared inactive.

KEHOE LAKE

Because there has been, appropriately, no funding for the project since FY 77, Kehoe Lake would be eligible for deauthorization next year. We request that the Corps be directed to prepare a report which would aide the Committee in considering that option.

Kehoe Lake would provide only 0.02 feet of flood control to the nearest downstream urban area and there would be, as a result of the 1966 reduction of storage capacity, no flood-free land below the dam. There are five man-made lakes within a 50 mile radius of the site and motorized traffic would not be allowed under the 500 acre minimum safety regulation. Therefore, recreation benefits would be low, and are outweighed by the damage which would be caused to Carter Caves and the Tygarts Creek Gorge, both popular tourist attractions now. Water quality and water supply benefits have been deleted because of revised federal law and lack of need. Additionally, the original cost-sharing contract with Kentucky has been ruled void under Kentucky law.

Further consideration of the Kehoe Lake project is unecessary and wasteful. The Kentucky Rivers Coalition is asking the Committee to instruct the Corps to prepare a deauthorization report for next year.

202 PROJECTS: TUG AND LEVISA FORKS OF THE BIG SANDY AND THE UPPER CUMBERLAND RIVERS

Section 202 of the Water and Power Appropriations Act of 1982 is a realistic and crucial legislation which is necessary to an area where piecemeal and traditional flood control measures are totally ineffective. The studies have produced alternatives which are suitable to addressing the flooding problem which has ravaged many eastern Kentucky communities in past years.

Corps studies have produced a plan for a floodwall in Pineville, Kentucky. Kentucky Rivers Coalition supports that plan. However, the flood control measures on these rivers must be provided in the coordinated fashion the Corps has been pursuing.

The Kentucky Rivers Coalition urges the Committee to provide increased, adequate, and steady funding to this work.

YATESVILLE LAKE

The Kentucky Rivers Coalition is pleased that there is no money in the budget for the Yatesville Lake, which has been identified by two administrations as a useless squandering of public money.

The Yatesville project would reduce flooding by only 2.53 inches at the nearest downstream community. There is so little development between the proposed dam site and that community that the Corps has reduced by 50% the amount of flood control storage needed.

The Kentucky Department of Parks has informed the Corps that unless the need for water supply storage was determined by Kentucky's Department for Natural Resources, the project should be designated inactive or deauthorized. The Kentucky DNR since reported that no need existed for substantial water supply storage in the foreseeable future.

Recently, the Corps and University of Louisville have studied the water quality in the watershed of the project and determined that the lake would be too polluted to be used for water supply at all.

It is clear in all aspects that the Yatesville Lake is a project which should be placed on the inactive list. The Kentucky Rivers Coalition strongly supports zero funding for it.

SUBCOMMITTEE RECESS

Senator JOHNSTON. We will be in recess until 2 p.m. this afternoon.

[Whereupon, at 11..15 a.m. the subcommittee was recessed to reconvene at 2 p.m. the same day.]

(AFTERNOON SESSION, 2 P.M., TUESDAY, APRIL 5, 1983)

NONDEPARTMENTAL WITNESSES

HEARING PROCEDURE

Senator ABDNOR. The subcommittee will come to order.

In the absence of the chairman of the subcommittee, Senator Hatfield, I have been asked, as a member of the subcommittee, to preside over today's session. Senator Hatfield expresses his regret that he cannot be here. However, on behalf of Chairman Hatfield and the subcommittee, I want to welcome each of you to the hearings today. We do have a large number of witnesses who wish to be heard. Therefore, it will take some self-restraint on the part of everyone to hold oral testimony to a minimum in order that all of you who have requested an opportunity to testify may be heard.

So, in keeping with the subcommittee wishes, I ask that the detailed prepared statements that each of you has worked out very carefully, be submitted for the record where they will be carefully reviewed. That is the record that the subcommittee will study in determining recommendations for the upcoming year. In this way you will have a carefully detailed record so that those members who are not present will be able to arrive at an independent judgment. Then, if each witness will summarize or highlight the important parts in his oral testimony, it will be most helpful to the committee.

So again, we welcome you and we will now proceed with our first witness.

It is a real pleasure for me to introduce the gentleman I rely on heavily for his background and knowledge, not only in water but other subjects as well, Senator Garn.

CENTRAL UTAH PROJECT

INTRODUCTION OF WITNESSES

Senator GARN. Mr. Ludlow, if you would like to come up. Along with Mr. Ludlow today is Mr. Siddoway and Mr. Roscoe Garrett.

The chairman asked me if I was going to testify. I always used to until I became a member of the subcommittee and I found out I had a lot more clout as a member of the subcommittee than testifying, so I quit testifying; but I do my work internally.

I am happy to introduce these three gentlemen today and say that I am very sorry, I had intended to be here along with them and introduce our Governor. Our Governor, Scott Matheson, had a heart attack the day before yesterday. He was obviously unable to be here. I understand as of this morning he is doing well and they are terming it a mild heart attack, but certainly we send our best wishes to the Governor who has, during the time that we have been in public office, together have fought and worked very hard for the Central Utah Project.

I have had the pleasure of working with him very closely over the last few years. We certainly wish him well and hope that the prognosis is as good as I was informed this morning.

So, Mr. Ludlow, I understand you will be representing the Governor. Please proceed.

STATEMENT OF LYNN LUDLOW, GENERAL MANAGER, CENTRAL UTAH WATER CONSERVATION DISTRICT

ACCOMPANIED BY:

L. Y. SIDDOWAY, MANAGER, UINTAH WATER CONSERVANCY DISTRICT
ROSCOE GARRETT, CENTRAL UTAH WATER CONSERVANCY DISTRICT

Mr. LUDLOW. I, too, have been informed it was a mild heart attack. He was recuperating in the Holy Cross Hospital and he has been asked to cancel his schedule for about 3 weeks. He was very disappointed that he could not be here today.

As we know, Governor Matheson has been a supporter of this project. He has led the delegation each year we came back to present testimony. He had a statement prepared and he was coming back to be here today but, of course, was not able to. He asked me to present his statement, and what I would like to do is hit one or two of the highlights of the statement and have the complete statement incorporated in the record.

Senator ABDNOR. Mr. Ludlow, I assure you it will be closely reviewed, because this committee and other water committees in this Congress have the greatest respect and regard for the Governor. So, we appreciate having both his statement and yours.

Mr. LUDLOW. Thank you very much.

I would like to give just a little time to Roscoe Garrett on my right who is of the Central Utah Water Conservancy District, and Mr. Siddoway who is a member of the board.

Let me read from the Governor's statement:

> I am honored, as Utah's Governor, to represent Utah and its citizens in expressing gratitude to this committee and to the Congress for the valuable Central Utah Project.
>
> Construction of the Central Utah Project was authorized 27 years ago by Congress as part of the Bureau of Reclamation's Upper Colorado River storage project. Current and potential benefits from the project include irrigation, municipal and industrial water, fish and wildlife, recreation, hydroelectric power generation, and flood control. Since completion of the Weber basin project in the northern part of the State over 20 years ago, the Central Utah Project constitutes the only major project for which Utah is currently receiving Federal funding. The State has solicited this assistance in the firm belief that the Central Utah Project benefits not only Utah, but the region and the Nation as well.
>
> The vital signs of Utah's economic health show improvement. But a healthy prognosis for Utah's future industrial and resource growth and increasing population will be determined to a large extent by development of the State's limited water supplies. Because of this inescapable fact, the Central Utah Project continues to rank as an essential element in the State's water planning process for storing, transporting, and distributing water to meet anticipated growth needs.

> The planned delivery of water from the Central Utah Project to the State's Wasatch Front area has become an increasingly urgent matter. Initial water deliveries were to have begun in 1974. Delays have been frustrating, but we continue to progress, and most funding and environmental questions have been resolved. Future population growth, however, along a major portion of the Wasatch Front area where 85 percent of the State's population is concentrated, is contingent upon the availability of additional water. City and county water officials caution that planning for this population growth has proceeded upon the assumption that Central Utah Project water will be available in the next several years.
>
> Therefore, we totally support President Reagan's 1984 fiscal year recommendation of $106,950,000 for continued progress toward completion of the Central Utah Project.

In the Governor's statement, he comments that the State is an active participant in our water resource development, that we have developed over the last 30 years some 650 small projects at the expense of $156 million. We, to the extent we can, are trying within the State to do our bit.

The Governor also in his statement wishes to support the Colorado River basin water quality improvement program which is related to maintaining the quality of water in the Colorado River.

In conclusion, the Governor did say:

> I want you to know that we in Utah appreciate your support of the vital Central Utah Project and encourage your continuing efforts to fund the project to its completion.

This is a portion of the Governor's statement. As I mentioned, I request that it all be filed.

Senator ABDNOR. I can assure you every word will be put into the record.

[The statement follows:]

STATEMENT OF GOV. SCOTT M. MATHESON OF UTAH

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The vital signs of Utah's economic health show improvement. But a healthy prognosis for Utah's future industrial and resource growth and increasing population will be determined to a large extent by development of the state's limited water supplies. Because of this inescapable fact, the Central Utah Project continues to rank as an essential element in the state's water planning process for storing, transporting and distributing water to meet anticipated growth needs.

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Therefore, we totally support President Reagan's 1984 fiscal year recommendation of $106,950,000 for continued progress toward completion of the Central Utah Project.

1979

The basic breakdown of the funding request is as follows:

Unit	Amount	Purpose
Bonneville Unit	$101,607,000	Construction
Jensen Unit	1,725,000	Construction
Upalco Unit	2,015,000	Construction
Uintah Unit	550,000	Planning
Section 8 Funds (Nonreimbursable)	793,000	All of Utah
TOTAL	$106,590,000	

Most of the requested appropriation will be directed to construction of the Bonneville Unit of the project. In this unit, construction will continue on the Upper Stillwater Dam. In addition, as part of the unit's Strawberry Aqueduct, a contract is planned to be awarded for construction of the North Fork Syphon, crossing the North Fork of the Duchesne River. Drilling will also continue on the Stillwater Tunnel, as will remedial work on the Soldier Creek Dam. The Vat Tunnel should be finished this year. Final decisions on the conveyance system to Salt Lake County will be made soon, with construction following shortly. A contract is also planned to be awarded to relocate Highway 40 near the proposed construction site of the Bonneville Unit Jordanelle Dam.

Funds requested for the Jensen Unit are scheduled to go toward construction of Reach 2 of the Tyzack Aqueduct. Reach 1 is expected to be completed this year.

Funds for the Upalco Unit will go toward land aquisitions and dam site studies.

While the Central Utah Project is the only project for which Utah seeks federal funding, the state has taken the initiative over the past 36 years to develop our water resources through more than 650 smaller projects. Through bonding and appropriations, the State of Utah has invested approximately $156 million in these water resource development projects. This figure includes approximately $92 million in bond funds authorized by the 1978, 1980 and 1983 State Legislatures. As further evidence of Utah's determination in water matters, the Utah Board of Water Resources recently authorized nearly $20 million to the Quail Creek Project in Southern Utah. The Quail Creek Project is a redesigned version of the Dixie Project proposed by the Bureau of Reclamation a number of years ago that failed to materialize. Bolstered by strong community support, a similar project will now be undertaken using state funds.

The Central Utah Water Conservancy District, sponsor of the Central Utah Project and representing the 12 most populous counties in the state through its board of directors, has invested approximately $30 million in local funds to construct three water treatment plants and other facilities in anticipation of completion of several units of the Central Utah Project.

The state's water development efforts are not directed solely toward impounding water supplies, but also toward conservation methods utilizing state of the art technology. The state provides financial encouragement for conversion from flood irrigating practices to sprinkle irrigation. Efficient use of groundwater is a major consideration with municipal systems, industrial processes and agricultural uses. Dual water systems, to enhance culinary water uses, are also encouraged.

In addition, the state is responsive to increasing public involvement in projects such as the Central Utah Project. The 1983 State Legislature enacted a change in the method of appointing members to the board of the Central Utah Water Conservancy District, the agency providing oversight for the Central Utah Project. Previously, the district's 19 board members were appointed by district court judges. Now appointment procedures involve county commissioners, the State Senate and the governor. This change will help solidify the community concensus so essential to continued progress on the CUP

We are not unmindful that diversions from the Colorado River create problems of increased salinity for downstream users. Therefore, I also wish to remind you that the seven Colorado River Basin states collectively support the Colorado River Basin Water Quality Improvement Program. I strongly support this program, and deem it important that this program move ahead promptly as the water resources of the Basin are fully developed and used. This is necessary to ensure that we honor the commitments that the states and the federal government have made to maintain the water quality of the Colorado River. This committee will receive detailed testimony concerning the specifics of the funding requirements from the Colorado River Basin Salinity Control Forum. I support those requests.

In conclusion, I want you to know that we in Utah appreciate your support of the vital Central Utah Project and encourage your continuing efforts to fund the project to its completion.

PREPARED STATEMENT

Mr. LUDLOW. Now, I wonder if we can have a brief statement from Mr. Garrett.

Mr. GARRETT. I realize the time is short and I believe the pertinent points have been covered.

As president of the Central Utah Water Conservancy District we appreciate you, Jake, and all of your people and especially this committee. We desperately need this project and even though the cost has gone up, it is still the best project we have.

I have also filed a statement for the record.

Senator ABDNOR. Thank you very kindly.

[The statement follows:]

STATEMENT OF R. ROSCOE GARRETT, PRESIDENT, CENTRAL UTAH WATER CONSERVANCY DISTRICT

I am R. Roscoe Garrett, President of the Central Utah Water Conservancy District, which serves as the Legal Agency to develop water resources in twelve Utah Counties to meet their water needs. It is with a great deal of honor that I appear before this distinguished committee to support continued funding for the planning and construction of the Units of the Central Utah Project.

The Central Utah Water Conservancy District concurs in and supports the President's Fiscal Year 1984 Budget recommendations to the Congress of the United States for the funding of the Central Utah Project. His recommendations include the following funds:

Unit	Amount	Purpose
Bonneville Unit	$ 101,607,000	Construction
Jensen Unit	1,725,000	Construction
Upalco Unit	2,015,000	Construction
Uintah Unit	550,000	Planning
Section 8 Funds (Non-Reimbursable)	793,000	Recreation,Fishery, Etc.

The Central Utah Project is a water resource development project that will provide critical needed water supplies to the Central Utah area. It is the fundamental foundation for the future growth of Utah. The project will develop municipal, industrial and irrigation water, hydroelectric power, provide flood control, recreation, and fish and wildlife enhancement.

With Utah's abundant land and mineral resources, favorable location, climate, and excellent labor force, it is in an unusually favorable position for continued economic growth. Use of its existing water supply has been the key to past development and is a limiting factor in the future progress and development of the District and the entire state.

The first diversions of water in Utah were primarily for irrigation, but as Utah has become more urbanized and industrialized, municipal and industrial water demands have increased rapidly. Meeting these needs now has a very high priority. Commercial growth and industrial development is replacing much of the established agricultural base that occurred primarily along the Wasatch Front area. This area, now the most densely populated area of

Utah, extends along the western slope of the Wasatch Mountain Range from Brigham City on the north to Nephi on the south. There is also a rapid population growth in the oil rich Uintah Basin in which the water requirements for this area will be satisfied from Units of the Central Utah Project.

The recent annual growth rate for all of Utah has been about 1.9 percent compared to a 2.2 percent growth rate for the Wasatch Front area. The trend in the rural counties of the State for this same period has been downward with a decrease in population of about 0.8 percent annually. As a result of this growth pattern, more than three fourths of Utah's population now resides along the Wasatch Front. This trend is expected to continue creating additional employment opportunities and the need for an increasing amount of municipal and industrial water.

Population projections are useful in estimating future growth and the attendant municipal and industrial water requirements. Population projections vary according to the basic data used and the assumptions made, but all projections for the period 1970-2020 indicate an overall substantial growth rate for the State of Utah, particularly along the Wasatch Front and in the Uintah Basin.

The potential economic impact to the future of Utah from construction of the Central Utah Project is tremendous. The Project's estimated construction cost of over 2 billion dollars will impact many varied areas in the State of Utah and throughout the Nation. Of this total impact about 71% will go for equipment and materials during the 15 to 25 year period of construction, about 25% in construction wages, and about 4% for transportation costs, and will create over 25,000 man-years of employment. Most of the material and equipment comes from within the State, including such things as cement, gravel, steel and metal, petroleum and chemical products, but the construction impacts will be felt far beyond Utahs borders.

Within the project plans, enough water will be made available from municipal and industrial use to support a population increase of over 500,000. An additional annual 300,000 acre-feet of water will be made available to irrigate 38,000 acres of land and sufficient supplemental irrigated water weill be available for over 300,000 acres of land. This is enough to increase agricultural production by the equivalent of approximately 1000 new farms of

100 acres each. The gross annual income for farm families will be initially increased by about $25 million and an estimated $60 million to $70 million will be invested by farmers as project water becomes available. The assessed valuation of property will be increased by close to three quarters of a billion dollars.

Fourteen new reservoirs will be created, including the enlarged Strawberry Reservoir, which will increase to four times its present size. A total of close to 2,000,000 acre-feet of capacity of new storage water will be constructed to make precious water available for Utah. The potential for boating will increase significantly and recreation and reservoir fishing will be enhanced greatly. Stream fisheries, within the project area, will be mitigated to preserve habitat conditions.

The history of the Central Utah Project has been one of delay and interruption. It is because of these disruptions that the project has been caught up in inflated prices; but even with all of these adversities, the project still proves to be the most viable, effective, and economical source of developing Utah's water resources of any alternative that can be offered today. The completion of the Central Utah Project must be put on an accelerated course. The funding level which has been suggested by the President is keeping in line with a program which can be met in securing an early completion of the project. This water project still remains the most vital project to the State of Utah in meeting its water needs for the future.

This District earnestly solicits your support of the President's Budget.

Thank you.

RESOLUTION

WHEREAS, the President's Fiscal Year 1984 Budget Recommendations to the Congress of the United States included the following request for new funds for the Units of the Central Utah Project:

Bonneville Unit	$101,607,000	Construction
Jensen Unit	$ 1,725,000	Construction
Upalco Unit	$ 2,015,000	Construction
Uintah Unit	$ 550,000	Planning
Fish, Wildlife & Recreation	$ 793,000	Non-Reimbursable

and,

WHEREAS, these funds provides for the continued construction and planning of key facilities of Units of the Project, and,

WHEREAS, it permits an adequate construction and planning program for the U. S. Bureau of Reclamation during Fiscal Year 1984.

NOW, THEREFORE BE IT RESOLVED, that the Central Utah Water Conservancy District does hereby concur with the recommendations included in the President's Budget and encourages Congress to appropriate the funds as included in the President's Budget.

BE IT FURTHER RESOLVED, that the Directors of the District requests the Governor of the State of Utah and Utah's Congressional Delegation to support and encourage Congress to appropriate the funds as included in the President's Budget.

BE IT FURTHER RESOLVED, that copies of this Resolution be transmitted to the President, Secretary of Interior, Commissioner of the Bureau of Reclamation, Utah's Governor, Utah's Congressional Delegation, and other interested parties.

CERTIFICATE

I certify that the foregoing is a true and accurate copy of a resolution adopted by the Board of Directors of the Central Utah Water Conservancy District on February 10, 1983.

Secretary

JENSEN UNIT, CENTRAL UTAH PROJECT

Senator ABDNOR. Mr. Siddoway.

Mr. SIDDOWAY. Mr. Chairman, if I can make a brief comment.

I am principally concerned on the funding on the Jensen unit and I would like to express appreciation to the committee, because we have been here many times asking for funding for this project and it is nearing completion. We expect that the aqueduct system will tie together in about April 1985 and at that point we will be delivering municipal water as well as agricultural water to the contracts we have. So, we do appreciate very much your support in the past and hope that you will fund all the central Utah projects as listed in the President's budget.

Thank you.

[The statement follows:]

STATEMENT OF L. Y. SIDDOWAY, MANAGER, UINTAH WATER CONSERVANCY DISTRICT

Mr. Chairman and Members of the Appropriations Subcommittee:

I am appearing here today representing the Board of Directors of the Uintah Water Conservancy District whose office is located at Vernal, Utah. I am, also, a member of the Board of Directors of the Central Utah Water Conservancy District with offices at Orem, Utah. I represent Uintah County on the Central Utah Board of Directors.

I am in support of funding for the Central Utah Projects as has been recommended by the President in his Budget for Fiscal Year 1984. The Budget recommendations for the Central Utah Project are as follows:

Jensen Unit	$ 1,725,000
Bonneville Unit	$101,607,000
Uintah Unit	$ 550,000
Upalco Unit	$ 2,015,000
Recreation & Fish & Wildlife	$ 793,000
TOTAL	$106,690,000

The Uintah Water Conservancy District has contracted with the United States to repay the cost of the Jensen Unit of the Central Utah Project and will, in the very near future, assume the care, operation, and maintenance of the Jensen Unit.

The funding requested for the Jensen Unit will complete the Tyzack Aqueduct Reach 1 and Pumping Plant, will complete the Jensen Unit Drainage System, will fund the Tyzack Aqueduct Reach 2, and will fund the construction of the Control System to control the Red Fleet Dam, the Tyzack Aqueduct Reach 1, and the Tyzack Pumping Plant. Another small aqueduct called Tyzack Aqueduct Reach 3 will be investigated and designed. Present plans indicate the first delivery of municipal water will be made in April of 1985.

Red Fleet Dam has been supplying irrigation water to farmers along Brush Creek and in Jensen for the past three years. The coming irrigation season will be the last year of the development period. The Red Fleet Dam is being operated by the Bureau of Reclamation under a "filling criteria" established by the designers. The Bureau expects to complete the filling process during the high run-off period of May and June of 1983. The recreation features at Red Fleet have been in place since last June and are being used extensively by the public.

With the anticipation of a high yield this spring from the watershed, a yield of from 140% to 150%, the Red Fleet Dam will be providing flood control for Brush Creek, adding protection to farms and structures along this waterway.

The Central Utah Water Conservancy District is presently designing a Water Treatment Plant. This plant should be under construction in the fall of 1983 and will be a key feature in providing a quality water supply to Vernal and Ashley Valley. The Utah Health Department has determined that the water being used for culinary purposes in this area must be treated to comply with Federal and State Clean Water Requirements. Tyzack Aqueduct Reach 1 terminates at the site of the proposed Water Treatment Plant and Tyzack Aqueduct Reach 2 takes water from the Treatment Plant to the Vernal and Ashley Valley culinary water systems. Contracts for the sale of municipal type water have been made with Vernal City, Ashley Valley Water & Sewer Improvement District, Central Utah Water Conservancy District, and the Jensen Water Improvement District. A new contract has been agreed upon with Chevron Resources Company. Under this contract Project industrial water will be supplied to Chevron for their use in the mining and milling of phosphate rock at their plant located approximately 15 miles north of Vernal.

Jensen unit construction, the construction of the Treatment Plant, and construction of pipelines associated with supplying water to users will add additional jobs to the unemployed in the Vernal area. This is extremely important; at this time the unemployed rate for Uintah County is 13.9%. This added municipal water supply is needed now to take care of additional people who have located in the area to work construction jobs of the Deseret Generation Power Plant, White River Shale, other shale developments, phosphate mining, as well as for energy developments of oil and gas.

In conclusion I wish to re-emphasize that I support funding for all Central Utah Projects: Bonneville, Upalco, Uintah, Jensen, and Section 8 funding for Recreation, Fish & Wildlife. All of these projects are very important to the State of Utah in providing water for people, for agriculture, for industry, for fish and wildlife, for flood control--the future of Utah will be determined by how well we plan and develop our water resources, keeping in mind Utah is the second driest state in the nation with an average yield of 8" to 13" of precipitation each year. Most precipitation comes in the winter in our high mountains and runs off in a short 60-day period. We must build The Central Utah Project to help us store and thereby use our vital water supplies.

CLOSING REMARKS

Senator GARN. May I say, Mr. Chairman, how brief, concise, to the point we Utahans are and we have taken 4 minutes less than our allotted time. I hope the committee will take note of that and be just as efficient and helpful to our needs as we have been to your needs for time today.

Senator ABDNOR. I assure you, Senator, we will make note of that. And let me say, as usual, you have a way of getting directly to the point without a lot of excess.

We appreciate you gentlemen coming so far to testify even for this short time. It is very important to the committee. Any additional testimony you would care to have placed in the record, we certainly will allow you to do so. Thank you very much.

SOUTH DAKOTA WATER RESOURCE DEVELOPMENT PROJECTS

STATEMENT OF BOB NEUFELD, SECRETARY, SOUTH DAKOTA DEPARTMENT OF WATER AND NATURAL RESOURCES

Senator ABDNOR. Our next witness is Bob Neufeld, who is secretary of the South Dakota Department of Water and Natural Resources. It is a real pleasure for me to welcome Mr. Neufeld. We in South Dakota have the highest respect for his ability and his record on water development. We know the important part he plays in my State and he is doing an outstanding job.

Mr. NEUFELD. Thank you, Mr. Chairman.

After that kind of introduction I don't think there is anything that my testimony can add. As you know, Senator Abdnor, my appearance here marks somewhat a watershed mark in water development in the State of South Dakota. It was not many years ago that there were various factions and groups appearing before committees such as this espousing positions for and against various water development projects. When Governor Janklow was elected in 1978, he assigned me the task of trying to put together a unified plan for the development of the State of South Dakota. We have done so. We have gotten the legislature to agree to that plan of development. The Governor has endorsed it. And we are now beyond the planning stage and working toward substantive implementation.

BELLE FOURCHE DAM, S. DAK.

With respect to the items in front of the committee, Mr. Chairman, I would like to say a few words about the following projects. On the Belle Fourche project, the administration has recommended $800,000 to replace some loose facing on the Belle Fourche Dam on that project. We support this appropriation but, as you know, there is a bill which you have authorized that is winding its way through the authorizing committee process, and while I recognize that authorizations normally precede appropriations for construction, there is never any harm in asking for anything that can be done to include funds for the reauthorization and rehabilitation of the Bell Fourche project will be greatly appreciated.

CENDAK STUDY

The second project on my list is CENDAK. The administration has a unique way of renaming all of South Dakota. I think it is called the South Dakota central water delivery study, if you look at the line item in the budget. There has been a recommendation of $450,000 to continue feasibility studies on that project. At the time their recommendation was put together by OMB, they felt that they could not, it is my understanding, support any further appropriations for that at this time because there is no specific report that will, in fact, be before the committee to justify further work on the project.

We have been working very furiously with the Bureau of Reclamation and local project sponsors and believe that a report will be finished by October or November of this year. At that point, in order to carry work forward and go into first-year preconstruction activities, an additional $1.5 million will be necessary to allow the project to continue through its preconstruction activities at an accelerated pace.

SOUTH DAKOTA WATER DELIVERY STUDY

The next item is South Dakota water delivery study, better known in South Dakota as the Garrison extension. The administration has recommended $400,000 to initiate feasibility studies in that project. We at the State level are prepared to match as much as $300,000 State money in order to continue feasibility of extending the Garrison project of North Dakota into South Dakota to provide flood control, irrigation, and water supply benefits to our State.

GARRISON DIVERSION UNIT, NORTH DAKOTA

The fourth item is a North Dakota project, the Garrison diversion unit. We are here to state South Dakota's support of the administration's $22 million for the continued construction.

GREGORY COUNTY PUMPED STORAGE PROJECT

The fifth item is the Gregory County project. The administration has recommended $2 million for continued planning and engineering on the hydroelectric pumped storage project. We feel this is not only adequate, but it is necessary this money be kept in the budget to allow environmental and technical studies to be done on the site. I don't need to go into the specifics of the project, but at the State level we have invited various investor- and consumer-owned utilities to join with the State to investigate the possibility of utilizing State financing mechanisms to provide 100-percent non-Federal cost sharing on that project as is the administration policy.

We are prepared with the investor-owned utilities to put up $400,000 this fiscal year of State and nongovernmental funds in order to investigate the feasibility and financing of that kind of a project.

LAKE ANDES—WAGNER UNIT, SOUTH DAKOTA

The sixth item is Lake Andes-Wagner irrigation project which is in the southeastern portion of the State. That project is moving ahead very quickly. Again, because of the timing with the publication of reports and the ability to get it done, the administration has recommended $150,000 for that project. We are preparing to spend this fiscal year $300,000 of State money to accelerate environmental and cultural moneys on that project. We feel that project will be ready for authorization hearings early next year.

WEB RURAL DEVELOPMENT PROJECT, SOUTH DAKOTA

The WEB project is the seventh one. That project is essentially in the same position as CENDAK in that there are no dollars in the budget for WEB essentially because the authorization of that project passed so late in the last fiscal year it was too late to include in the budget process. We are informed that the Bureau of Reclamation has the capability of expending $16 million in that project over the next fiscal year.

WESTERN DAKOTAS REGION OF SOUTH DAKOTA STUDY

And, finally, the last item is a study being done by the Corps of Engineers called the western Dakotas water supply study. That project is scheduled to end in another year or two. There is an administration budget of $150,000. We feel that in order to finish that project on time, which is also giving us valuable information to support the other water supply works that are going on in South Dakota, there is an appropriation necessary of $350,000.

Mr. Chairman, I have submitted my testimony and also I have a statement to present on behalf of the Oahe Conservancy Subdistrict, which contains the projects for the Garrison extension, CENDAK, and WEB, statements essentially supporting the positions I have related to the committee and I would like to submit those to the committee staff for the record at this time.

Senator ABDNOR. Without objection they will be made a part of the record.

Mr. NEUFELD. That concludes my statement, Mr. Chairman.

I have more detailed explanation of my request in our prepared testimony.

Senator ABDNOR. Thank you Mr. Neufeld for that very fine summary of the South Dakota projects—and fine projects they are.

With us today, although he will not be testifying, is Mr. Hauschild of CENDAK. His statement, I believe, will be made a part of the record and the Oahe board is also represented.

Mr. HAUSCHILD. Yes, sir, Mr. Chairman, we have Mr. Patrick Sieh, manager; and Paul Riley, staff member of the subdistrict; and Tom Knutson is here.

Senator ABDNOR. Why don't you gentlemen stand up so that we make a point that you are in attendance, the same as CENDAK.

We are happy to have all of you gentlemen here and know of your great interest in the project to come all the way to Washington to back up what Mr. Neufeld has been saying.

We thank you all. Your entire statements and your resolutions will be made a part of the record. Thank you.

Senator Pressler could not be here this afternoon, but has asked that a statement supporting those items be made part of the record.

[The statements follow:]

STATEMENT OF SENATOR LARRY PRESSLER OF SOUTH DAKOTA

Mr. Chairman, I would first like to thank you for the opportunity to express my views before your committee.

As a Senator from South Dakota, a state with a great interest in water development, I am very interested in the FY 1984 Energy and Water Development Appropriations bill. Last year, H.R. 4347, a comprehensive water development bill, was passed by Congress and signed into law. The bill reauthorized the WEB rural water project and authorized feasibility studies on the CENDAK and Garrison Extension projects. The Administration has requested funds for continuation of the Central South Dakota Water Study (CENDAK) project, and the South Dakota Water Delivery Study, but because the bill was passed late in the year, no funds were requested for the WEB project. The WEB project will soon begin construction using the $1.9 million appropriated in FY 1981 and $2 million appropriated under the supplemental appropriations jobs bill which was recently passed by Congress. This $3.9 million, along with state and local funds, will allow the project to remain on schedule. The WEB construction schedule calls for $16 million in FY 1984.

In addition to these three projects, several other smaller studies and construction projects in South Dakota need funding. These projects include the Belle Fourche Irrigation project, advance planning of the Lake Andes-Wagner unit, and completion of the Rapid Valley project.

Most of these projects are part of the commitment made to South Dakota for the sacrifices made for the construction of the four mainstream dams on the Missouri River in South Dakota. These four dams flooded over 500 thousand acres of South Dakota farmland to provide flood control, navigation and hydroelectric power to downstream states. In return for these sacrifices, South Dakota was promised water development. South Dakota has not yet received the promised water development compensation, and these projects, if completed, will begin to fulfill this commitment.

Mr. Chairman, I urge the Committee to provide funding for construction of the WEB project and at least the funding in the budget request for the other South Dakota projects. These projects are vital to South Dakota and they will contribute to the fulfillment of the federal commitment to my state.

Thank you for your consideration of this matter. I look forward to continuing to work with your committee on energy and water development issues.

STATEMENT OF WARREN R. NEUFELD, SECRETARY, SOUTH DAKOTA DEPARTMENT OF WATER AND NATURAL RESOURCES

Mr. Chairman and members of the Committee, my name is Warren R. (Bob) Neufeld, Secretary of the South Dakota Department of Water and Natural Resources. I would like to thank the Committee for this opportunity to review the need, progress and benefits of water development in South Dakota.

Since Governor William Janklow in 1981 launched a major water development program in South Dakota, we have directed all available state and local resources towards developing our water project priorities. We have attempted to fulfill all of the known and perceived requirements for successfully developing water projects. This has not been an easy task since the Administration and Congress have yet to clearly specify the new rules that the states should follow to obtain necessary water development. South Dakota has made a concerted effort through our state water plan to determine water development needs and identify water project priorities. We have established a special water development fund to provide assistance for water project studies and construction. Project sponsors have collected substantial local interest sign-up fees which are also dedicated to project development. We have made a strong state commitment to water development and we believe an equal commitment should be forthcoming from the federal government.

The South Dakota water development program is based on the recognition that we are more dependent on agriculture than any other state in the country. Per capita income figures clearly indicate that when the farmers and ranchers in the state do well, everyone in the state benefits economically. Annual precipitation figures clearly indicate that drought is a fact of life in South Dakota. Such drought period have a disastrous impact on our agriculturally dependent economy. As a result of these factors, the goal of the state water development program is to develop water projects that stabilize and strengthen the economy of the state and improve the quality of life for our citizens.

Under the leadership Governor Janklow has provided, we are united in the pursuit of our state water project priorities. The executive and legislative branch of state government have established a definitive policy and process for development of a state water plan and state water projects. The state water plan is not a long Christmas gift list, but rather it is a serious review and evaluation of only the most important and beneficial projects that will fulfill the goal of the state water develoment program. The state water plan from the outset has received scrutiny from and includes the recommendations of the general public and the substate water resources conservancy subdistricts. It was further reviewed and refined by the state Board of Water and Natural Resources, debated and passed by the State Legislature, and finally approved by the Governor. The state water plan is a model approach to exercising state responsibility for water resources and developing a realistic development strategy.

Of course, the state water plan has no practical value without sufficient funds to implement it. South Dakota is willing to put her money where her mouth is, and we have taken the next step in the development process by providing at least the seed money necessary to get our projects started. The state water development fund has been established and millions of dollars have been provided in the form of low-interest loans for projects included in the state water plan. These funds have been used for both the development of projects that have reached the construction stage and for projects that need further feasibility study.

South Dakota has made a commitment to water development and we are doing what is necessary to transform this commitment into physical reality. It is now time for the Administration and Congress to fulfill the federal commitment to South Dakota by providing the funds to further state water development efforts. Interior Secretary James Watt has correctly and repeatedly identified the federal commitment to South Dakota. South Dakota has lost over 500,000 acres as part of the Pick-Sloan Program in order to provide downstream states with flood control and navigation benefits. South Dakota has yet to receive the water development we were designated to obtain under the Pick-Sloan Program to compensate us for the valuable land that was lost in conjunction with the construction of the four Missouri River mainstem dams located in the state.

A brief description of our current projects and needs follows:

1. Belle Fourche.

   Project Needs: The Administration has included $800,000 in the FY '84 budget for repair of damaged protective facing on the Belle Fourche Dam. In fact, the Belle Fourche project is in need of major rehabilitation work. The Administration has opposed the Belle Fourche rehabilitation project on the basis of insufficient economic benefits and the inappropriate use of Pick-Sloan Program power revenues to cover a portion of project costs. The Administration's understanding of this project, however, is sadly mistaken. We can clearly demonstrate that the project will sustain an important ranching economy which involves three neighboring states, and that the project repayment contract will provide a greater return (at least 20%) than similar projects. Also, the use of Pick-Sloan power revenues for project assistance is entirely appropriate if not mandatory given a clear understanding of the Pick-Sloan Program and the associated federal debt to South Dakota. Legislation was approved last year by the Senate (S. 933) and has been reintroduced this year (S. 448 and H.R. 1282) to authorize the Belle Fourche rehabilitation project. In conjunction with the anticipated authorization and your support for this project, an initial appropriation of any amount would help get this $48 million project started. Belle Fourche testimony submitted last month on my part to the Senate is attached as part of this presentation. (See Exhibit 1)

   Project Description: The Belle Fourche Irrigation Project was authorized by the State Legislature as part of the State Water Resources Management System in 1981. The original project was authorized by Congress in 1904 and completed in 1914, providing irrigation water for over 57,000 acres in Butte County. This project was one of the first Bureau of Reclamation projects. Approximately 200,000 acre-feet of water is diverted annually from the reservoir for irrigation; however, only about 67,000 acre-feet is delivered to the field, approximately a two-thirds loss. The delivery system, therefore, needs to be modernized and updated. Rehabilitating the facilities will reduce operation and maintenance costs, conserve water, provide safety features, lessen risk of system failure, reclaim agricultural lands affected by seepage losses, and protect the economic welfare of the area. Approximately $40 million will be needed to rebuild or improve the old diversion structure and various canals and laterals. Feasibility reports for the project have been completed by the Bureau of Reclamation.

2. CENDAK

Project Needs: The Administration has included $450,000 in the FY '84 budget for continued general investigations. The state believes that this is the absolute minimum amount necessary. The current CENDAK feasibility report is progressing very well and it CENDAK could be ready for project construction authorization as early as next year. An appropriation of $1.95 million would allow for accelerated project progress and first year pre-construction work in FY '84. The South Dakota State Legislature and the Oahe Conservancy Subdistrict have recently approved specific resolutions of support for the CENDAK project. (See Exhibit 2.)

Project Description: The CENDAK project was authorized by the State Legislature as part of the State Water Resources Management System in 1982. The project will transport Missouri River water to the counties of Hughes, Hyde, Hand, Spink, Beadle, Sully, and Faulk for irrigation of about 400,000 acres. Although irrigation is the primary purpose of the project, water for municipal and industrial use, rural water systems, livestock supplies, recreation, fish and wildlife, stream flow augmentation, and low head power generation would also be available.

The project was initiated by a six-county grassroots organization, the CENDAK Water Supply System, Inc., and has collected over $300,000 in local interest contributions from project area residents. These funds have been used to accelerate project feasibility study efforts. In addition, the South Dakota Conservansy District has also contributed financially to the CENDAK project by approving a $300,000 water project study loan from the South Dakota Water Facilities Construction Fund.

3. Garrison Diversion

Project Needs: The Administration has included $400,000 in the FY '84 budget for continued general investigations of the Garrison Diversion extension project (South Water Delivery Study) in South Dakota. The appraisal level study for this project is now just about complete. The $400,000 budget request is just sufficient to proceed with actual feasibility investigations. It should be noted that South Dakota officials have recently met with North Dakota representatives regarding the Garrison project and have reached accord on most major issues. The two states are cooperatively working together on the Garrison Diversion project. We fully support the Administration's budget request of $22.3 million in FY '84 for Garrison Diversion construction work in North Dakota. The Oahe Conservancy Subdistrict has recently approved a resolution in support of the Garrison project in North Dakota. (See Exhibit 3.)

Project Description: The 1981 State Legislature authorized the Garrison Diversion Study as part of the State Water Resources Management System. The conceptual plan for extending the Garrison project was developed with the goal of designing a project that would turn the potential negative aspects of North Dakota's Garrison Diversion Unit into a project which could provide flood control; deliver additional high quality water for irrigation, industrial, and municipal uses in South Dakota; and improve recreational opportunities in the James River Valley.

In March of 1981, Governor Janklow appointed a five member Board to manage the study of the Garrison Extension concept. The early meetings of this Management Board were held to discuss the idea of using additional flows in the James River provided from North Dakota's Garrison Diversion Unit, together with storage features constructed in South Dakota, to provide water for agricultural, municipal, industrial and recreational use. With assistance from the Bureau of Reclamation, the Board began to develop an appraisal level study in October of 1981. The initial phase of the study was completed in January of 1982. The final report on the appraisal level study was completed last month.

Included in the South Dakota water development bill, (H.R. 4347), which was approved by Congress and signed by President Reagan in September of 1982, was an authorization for the feasibility study of the Garrison Extension Concept. Assuming the appraisal level study identifies an acceptable development plan, and feasibility study can begin immediately.

4. Gregory County

Project Needs: The Administration has included $2 million in the FY '84 budget for continued planning and engineering work on the Gregory County hydroelectric pumped storage project. This funding is absolutely essential to conduct preliminary investigations such as geological testing and environmental studies. In addition, the state and other non-federal interests are devoting as much as $400,000 to initiate the energy and marketing evaluations that must be conducted in association with a project of this magnitude.

Project Description: The Gregory County Pumped Storage Unit was authorized by the 1981 State Legislature as part of the State Water Resources Management System. This facility will use off-peak electricity to pump water from Lake Francis Case to an 80,000 acre-foot reservoir on the Missouri River bluff over 700 feet above the lake. Water from the reservoir will be released back to the lake through turbines to generate 2,360 megawatts of peak-hour electricity.

The U.S. Corps of Engineers, in June 1982, completed an interim report and final environmental impact statement for the Gregory County Project. The Corps of Engineers report concludes that the pumped storage facility would provide 20% to 25% of the estimated additional electric generating resources that will be needed during the 1990's in the seven-state project study area (Minnesota, Iowa, Nebraska, South Dakota, North Dakota, Montana, and Wisconsin).

The Corps of Engineers report recommends that the Gregory County Hydroelectric Pumped Storage Facility be constructed in two stages of 1,180 megawatts per stage. Stages I and II are estimated to cost $586 million and $535 million, respectively; and the annual net benefits and benefit-cost ratio are estimated to be $197 million and 1.6 respectively. The Corps of Engineers development schedule calls for construction of Stage I to begin in 1986 and to be completed (on-line) in 1992. Stage II construction would begin in 1990 and would be completed (on-line) in 1996. The U.S. Board of Engineers for Rivers and Harbors, on September 3, 1982, approved the Corps of Engineers interim report and final environmental impact statement for the Gregory County Hydroelectric Pumped Storage Facility.

The Administration and the Corps of Engineers has recently developed a cost-sharing and financing policy for water resources projects which requires nonfederal interests to assume 100% financing responsibility for hydroelectric facilities. The State of South Dakota has indicated a willingness to accept the leadership in packaging a nonfederal financing plan for the Gregory County Hydroelectric Pumped Storage Facility.

5. Lake Andes-Wagner.

Project Needs: The Administration has included $150,000 in the FY '84 budget for advanced planning work. This is the absolute minimum necessary to proceed with the Lake Andes-Wagner project. We anticipate that this project will be ready for construction authorization early next year. A total appropriation of $400,000 is urgently needed to accelerate advanced planning work and to possibly expand the project.

Project Description: The 1975 State Legislature authorized the Lake Andes-Wagner Irrigation Project, Charles Mix County, South Dakota, as a part of the State Water Resources Management System. The 1975 Legislature, along with the authorization, provided a $35,000 grant for use toward payment of costs of the preliminary feasibility study of the Lake Andes-Wagner Irrigation Project.

The preliminary feasibility study showed the project to be feasible. Based upon this preliminary study, the residents of the irrigation district approved a bond issue of $850,000 for the purpose of completing a master plan and final feasibility study. The master plan and final feasibility study were completed and the reports and findings were released in December, 1977.

In 1981, the Bureau of Reclamation began a reanalysis of the privately sponsored feasibility study, and a study team which includes staff from the state was formed. The initial estimate on irrigable lands was approximately 13,500 acres. Under a reevaluation plan initiated this past spring, however, the Bureau identified an area of about 35,000 acres which could be irrigated under sprinkler irrigation. A committee of the irrigation district members is currently meeting with the farmers to gather further support for the $80 million project.

Congress has made a line item change in the Bureau's budget for the project in the amount of $75,000, the amount needed to complete the study phase and enter the design construction phase in FY '84. The benefit/cost ratio for this project is 1 to 1 based on the 13,500 acre budget. It is assumed that this ratio would improve slightly due to the project expansion.

6. WEB

Project Needs: The Administration has not included any funds in the FY '84 budget for construction work on the WEB project. It should be understood that the Administration is not opposed to WEB. The Administration simply could not include a funding request for WEB when the FY '84 budget was prepared in early 1982 because the WEB construction authorization was not approved until late 1982. The WEB project sponsors and the Bureau of Reclamation have developed a capability statement for FY '84 that totals $16 million. This amount does not include the $3 million received by WEB from the 1983 Emergency Jobs Act. Any amount up to $16 million would be well used during the upcoming fiscal year for further WEB construction progress. The Oahe Conservancy Subdistrict has recently approved a resolution in support of the WEB project. (See Exhibit 4.)

Project Description: The WEB Pipeline project was authorized by the 1981 State Legislature for inclusion in the State Water Resources Management System. The $70 million project is a domestic water pipeline that will supply treated Missouri River water for rural domestic, livestock and municipal users in portions of nine counties in north central South Dakota. The project area includes all or parts of Walworth, Edmunds, Brown, Spink, Day, Campbell, McPherson, Faulk, Potter, and Hand Counties. Domestic drinking water via a system of buried pipeline would be provided to 2,925 rural residences and 51 small towns for a total of about 30,000 people. The public water supplies in 98% of WEB cities, towns and rural systems that currently have public water supply systems violate two or more of the federal Safe Drinking Water Act maximum contaminant levels, and fourteen systems must find completely new water sources by the end of 1983.

The WEB project was federally authorized in the "Rural Development Policy Act of 1980" and received an appropriation of $1,900,000 for the federal fiscal year ending September 30, 1981. Conditions concerning the deauthorization of the Oahe Unit were also placed on the WEB Authorization. On April 8, 1981, the House Appropriations Subcommittee on Interior rescinded the money appropriated for WEB. Following this action, the South Dakota Congressional Delegation introduced a bill in July 30, 1981, reauthorizing WEB and restoring construction funds as well as providing language to effectuate a resolution to the Oahe Unit authorization issue. The bill has passed, and again, an appropriation of $1,900,000 has been assigned to WEB.

7. Western Dakotas Region of South Dakota Water Supply Study

Project Needs: The Administration has included $150,000 in the FY '84 budget for continuation of the Western South Dakota water supply study. This amount will not be sufficient to complete the study according to the current schedule (FY '86). It is recommended that the FY '84 appropriation for the Western South Dakota study be increased from $150,000 to $350,000. This recommendation along with anticipated Corps of Engineers' action of re-programming $120,000 from the FY '83 budget for the Eastern South Dakota water supply study to the Western study, which is acceptable to the state will allow the timely completion of this most worthwhile regional study effort.

Project Description: As authorized by Congress, the objective of the Western South Dakota water supply study is to prepare a comprehensive plan for the efficient utilization of water and related resources for water supply (municipal, industrial, rural domestic, agricultural), flood control, water quality control, water for energy, water conservation. The study covers the entire portion of the state west of the Missouri River.

I would like to thank the Committee for this opportunity to review the reasons why the Belle Fourche Irrigation Project is in need of rehabilitation, why the project should be reauthorized as a unit of the Pick-Sloan Missouri Basin Program and why this matter is so important to South Dakota.

The Belle Fourche Irrigation Project was one of the first such projects constructed under the federal reclamation program. Authorization was received 79 years ago in 1904, with construction commencing in 1905 and completed in 1914. Although the project has very admirably served the western part of South Dakota, the material and equipment used to build the storage dam are obsolete by anyone's standards. For example, wooden flumes, unlined canals, hand operated gates and unreinforced concrete have now withstood almost a century of extremely hot summers and freezing winters. Many of the structures and facilities have served their expected useful life and are now in need of renovation or replacement. These obsolete facilities have caused the operation and maintenance costs of the project to increase each year, with some of the structures requiring more maintenance expense than can be prudently made. The Bureau of Reclamation estimates that at least 20,000 acre-feet a year could be saved by rehabilitation of the Belle

Fourche project would take place. Furthermore, based on historcal precedent fully 40% of the dollars spent on the Belle Fourche Rehabilitation project would go to paying salaries and wages, certainly important at this time.

There are certainly many sound engineering and water conservation reasons justifying the rehabilitation and modernization of the Belle Fourche project. Of more concern to this Committee, however, should be the preservation of this project's output for the benefit of the economy of the farming and business community dependent on it. Without the project, most of the project land would revert back to dry pasture and hay. The stable feed source that has supported the cattle and hogs fed for the last 75 years in Butte County and the adjacent areas of Montana and Wyoming surrounding Belle Fourche would then be gone. The importance of this relationship is perhaps best illustrated by the fact that when South Dakota experienced a drought from 1974 to 1976, cattle numbers in South Dakota except for the Belle Fourche area dropped dramatically. From 1974 to 1978, all cattle in South Dakota decreased by 25%, beef cows that calved decreased by 30% and hog numbers declined by 27%. In Butte County, where the Belle Fourche project produces most of the corn and other livestock feed, all cattle decreased by only six percent, beef cows decreased by 13% and hog numbers increased by 11%. These figures show the significant impact a stable feed supply can have on livestock production. This is especially important when you consider that over 70% of South Dakota farmers' total cash receipts are from the sale of livestock.

The impacts of drought in this state have been disastrous. The Farmers Home Administration estimated that losses caused by drought were $1 billion in 1976 and $600 million in 1980. The rehabilitation of the Belle Fourche project will continue to provide a buffer against the disastrous effects of drought in Butte County and the tri-state area. The bill before you is in essence a reauthorization for the future of agriculture in much of western South Dakota.

There are several logical reasons why the Belle Fourche Irrigation Project should be reauthorized under the Pick-Sloan Missouri Basin Program. First of all, the project is located in the Missouri River Basin and the Belle Fourche River contributes water to the operation of the four mainstem dams in South Dakota. The project was not included under the Flood Control Act of 1944, whereby irrigation development costs could be repaid by power revenues, because the project was operational and did not require any additional federal funding. The Belle Fourche project was, however, identified in the Act to receive supplemental water for irrigation.

Second, during the 40 years that have passed since the passage of the 1944 Flood Control Act, the Belle Fourche project has continued to deteriorate substantially and now is in need of revenue from power generation to restore its effectiveness. This revenue assistance will not have an impact on the Pick-Sloan Missouri River power rates and will not decrease the financial assistance available for other irrigation projects. The irrigation previously and currently scheduled for development as part of the Pick-Sloan Program is not even close to being realized. We believe, therefore, the existing power revenues are more than adequate to include repayment of the portion of costs beyond the Belle Fourche project water users' ability to pay.

A third reason why the Belle Fourche Irrigation Project should be reauthorized under the Pick-Sloan Program is that reauthorization would give substantive meaning to Congressional and Administration acknowledgement that South Dakota should be compensated as promised for the loss of over 500,000 acres of prime land flooded by the construction of the Missouri River mainstem dams. South Dakota was promised that the federal government would develop sufficient irrigation to at least offset the amount of land that was lost. Unfortunately now, almost forty years later, the first federally irrigated acre in South Dakota has yet to be developed.

The last and perhaps most significant reason supporting Belle Fourche reauthorization is that consistency with past federal policy all but requires that the Belle Fourche project be included as part of Pick-Sloan. In September, 1970 Congress considered a proposal very similar to the one before you today. Public Law 91-409 reauthorized the entire Riverton project in central Wyoming as the Riverton Unit of the Pick-Sloan Program. The Riverton project, like the Belle Fourche project, is an old Bureau of Reclamation facility that, except for its third division, was built and operating before the Pick-Sloan Flood Control Act of 1944 was enacted. Both serve approximately the same size of area (60,000 acres). Like the Riverton reauthorization, reauthorization for the Belle Fourche calls for project rehabilitation and betterment. As with Riverton in 1970, today there is a great need to put the Belle Fourche project on a sound operating and fiscal basis. Like Riverton, the obligation of the Belle Fourche Irrigation District will be assumed in part by revenues from the net proceeds of the Missouri Basin power system, thereby providing financial assistance for those costs which are beyond the water users' current payment ability. The total estimated project cost of the Belle Fourche project as reauthorized ($48.8 million) compares favorably to the total estimated project cost ($45.8 million) for Riverton. Unlike Riverton, however, the Department of the Interior will not endorse rehabilitation of the Belle Fourche project.

Such opposition is extremely difficult to understand, especially when you consider the facts and figures. The Riverton project repayment contract investment should be made as a preventitive cure instead of providing financial drought relief as an inadequate treatment of the illness, whether the federal debt owed to South Dakota should be further ignored, and whether such total neglect is really in the best interests of the federal taxpayer. We strongly suggest the answer to these questions is an emphatic "No".

South Dakota today asks that you support the people of the Bell Fourche project as you have supported other domestic irrigation projects.

Resolution of Support

WHEREAS, construction of the Garrison Diversion Unit is an obligation of the United States to the State of North Dakota and other upper Missouri Basin states, and

WHEREAS, The Garrison Extension Project cannot become a reality in South Dakota without completion of the Garrison Diversion Unit, and

WHEREAS, South Dakota officials have been assured that no wildlife mitigation will occur in South Dakota for construction of the Garrison Diversion Unit in North Dakota, and

WHEREAS, Current studies indicate that the Garrison Diversion Unit and Garrison Extension can be managed to reduce spring flooding along the James River in South Dakota and to supplement badly depleted flows of the James River during the summer months in South Dakota, and

WHEREAS, South Dakota cities and landowners in the James River Basin are in need of additional flows in the James River during much of the year, and

WHEREAS, Existing water rights on the James River exceed existing supplies in the river, and

WHEREAS, Agricultural irrigation is everywhere in the United States recognized as a beneficial use of water, and

WHEREAS, All citizens of the states of North and South Dakota will benefit directly or indirectly from water development in the Upper Missouri Basin, and

WHEREAS, The people of the United States have long recognized the national benefits of federally supported water development in the western United States,

NOW THEREFORE BE IT RESOLVED, that the Oahe Conservancy Sub-district of South Dakota supports President Reagan's budget request of $22.3 million for the Garrison Diversion Unit in FY1984 in continuing recognition of the Federal Government's obligation to the Upper Missouri Basin states.

Adopted this 22nd day of March, 1983.

Ronald Frankenstein

Ronald Frankenstein, Chairman

Dale Hargens

Dale Hargens, Secretary

Resolution #83-2

WHEREAS, the WEB Pipeline Project was authorized under Public Law 96-355 for construction purposes, and

WHEREAS, the WEB Project is included as an endorsed project of the South Dakota State Water Plan, and

WHEREAS, the WEB Project has the endorsement of the South Dakota State Legislature, Governor William Janklow, and the South Dakota Congressional Delegation, and

WHEREAS, the WEB Project would benefit not only users in the WEB area but would also benefit the Oahe Subdistrict and the State of South Dakota, and

WHEREAS, the WEB Project would provide Missouri River water to 3,[illegible] rural hook-ups and up to 40 to 50 towns in the Oahe Subdistrict area with better domestic water;

NOW THEREFORE BE IT RESOLVED, that the Oahe Conservancy Subdistrict Board supports WEB's request for FY'84 funding and requests Congressional support of such funding request.

Adopted this 22 day of March, 1983.

Paul Riley

Paul Riley, Manager
Oahe Conservancy Subdistrict

Resolution # 83-1

WHEREAS, the State of South Dakota gave up 509,000 acres of Missouri River bottomland for flood control benefits to lower states, and;

WHEREAS, the State of South Dakota was promised irrigation and other benefits in return for that loss of land, and;

WHEREAS, irrigation is not only a local benefit and a Sub-district benefit but also a statewide benefit, and;

WHEREAS, the CENDAK Project located in the southern half of the Oahe Conservancy Sub-district has broad local and statewide support, and;

WHEREAS, the CENDAK Project would provide water to irrigate approximately 400,000 acres of land, and;

WHEREAS, U.S. Senate bill 1553 authorized study funds for the CENDAK Project, and;

WHEREAS, the Governor, the South Dakota State Legislature and the Board of Water and Natural Resources have endorsed and provided study funds for the CENDAK Project;

NOW THEREFORE BE IT RESOLVED that the Oahe Conservancy Sub-district supports present efforts to determine whether the CENDAK Project is feasible.

Adopted this 22nd day of March, 1983.

Ronald Frankenstein
Ronald Frankenstein, Chairman

Dale Hargens
Dale Hargens, Secretary

SENATE CONCURRENT RESOLUTION NO. 21

Introduced by: Senators McClure, Harding, Kleinsasser and Shanard and Representatives Volesky, Eichman, Don Ham, Heidepriem, Homan, Munson, Robbennolt, Warkenthien and Wieczorek

A CONCURRENT RESOLUTION, Expressing legislative intent to the Board of Water and Natural Resources regarding water facilities construction fund loans to the CENDAK project.

WHEREAS, it is the policy of the state of South Dakota that we conserve, develop, manage and make optimum use of all this state's water resources; and

WHEREAS, the Missouri River Flood Control Act of 1944 provided for the containment and development of Missouri River waters for the beneficial use of South Dakota citizens; and

WHEREAS, the agricultural economy of South Dakota is highly dependent upon a stable and reliable source of water; and

WHEREAS, the Central Dakota Water Project known as CENDAK is a locally-initiated and supported multi-purpose project that would serve the water needs of many South Dakotans; and

WHEREAS, CENDAK meets all of the criteria established by the board of Water and Natural Resources for projects to receive loans from the water facilities construction fund; and

WHEREAS, the amount of $500,000 is needed to enter the planning and preconstruction design phase of the CENDAK project, and sufficient state effort is needed to demonstrate to the Department of Interior that South Dakota is committed to the principles of local, state and federal participation in developing resources for the benefit of its citizens; and

WHEREAS, loans from the water facilities construction fund may require a twenty percent local matching effort; and

WHEREAS, the timing of the state and federal fiscal years create an eighteen-month lag between legislative action and congressional response, requiring that South Dakota must anticipate later needs:

NOW, THEREFORE, BE IT RESOLVED, by the Senate of the Fifty-eighth Legislature of the state of South Dakota, the House of Representatives concurring therein, does hereby request the board of Water and Natural Resources to select the CENDAK water construction project for a $500,000 loan to be made upon CENDAK's proper application and fulfillment of all requirements to obtain funding from the water facilities construction fund.

Adopted by the Senate, March 2, 1983
Concurred in by the House of Representatives, March 3, 1983

Lowell C. Hansen II
President of the Senate

Joyce Hazeltine
Joyce Hazeltine
Secretary of the Senate

Jerome B. Lammers
Speaker of the House

Paul Inman
Paul Inman
Chief Clerk of the House

STATEMENT OF DAVE HAUSCHILD, CHAIRMAN, CENDAK WATER SUPPLY SYSTEM, INC.

Mr. Chairman, Members of the Subcommittee, my name is David Hauschild. I'm a farmer-rancher residing in Hughes County near Pierre, South Dakota, and I am also Chairman of the CENDAK Board of Directors. I submit this statement today on behalf of the CENDAK Board of Directors.

CENDAK was begun about two years ago by local people who had a desire to develop a project that would deliver water eastward from the Missouri River to the James River Basin for multipurpose water development.

County organizations were formed in the area to coordinate activities at that level. Each county is represented on the CENDAK Board of Directors.

Early activities were financed by membership dues collected by the county organizations and by land assessments collected on approximately 400,000 acres on which landowners expressed an interest to irrigate. To date, in excess of $200,000 and many donated hours of time have been contributed by the grassroots people.

Irrigation will be by various forms of highly efficient sprinkler application on a dispersed acreage. Application rates would be as required to supplement natural precipitation.

The basic purpose for irrigation is to provide supplemental water at critical drought periods during the growing season so that stabilized feed supplies are available in the area. This, in turn, would stabilize the economic base and prevent the wild gyrations of the economic indicators often associated with drought years such as those experienced since 1976.

The USBR was contacted about one year ago to ascertain their possible involvement in required feasibility studies. Several meetings with the Bureau eventually provided a new two-step planning procedure which would greatly reduce the time and costs required when compared to conventional feasibility studies. This unique approach, the first in the nation, required the joint efforts of the USBR, the State of South Dakota, and CENDAK.

Feasibility studies have been progressing rapidly. A planning Formulation Working Document will be completed in the very near future.

CENDAK's consulting engineer, Bookman-Edmonston Engineering, Inc., recently completed personal interviews of participating CENDAK landowners. The purpose of this effort was to give each landowner an opportunity to express his preferences for location of irrigation development, location of water turnouts and present and anticipated cropping and livestock practices. This will allow CENDAK to be tailored to the desires and requirements of the local people.

The positive response received during this interview process is the best possible indication that the local people continue to give strong support for the development of CENDAK.

The current three-way feasibility studies will culminate toward the end of the current calendar year. We would anticipate seeking federal authorization for construction of CENDAK shortly thereafter.

Funding will be required to allow CENDAK to continue to progress at a rapid rate. We support the USBR request of $450,000 for CENDAK study funds during FY 1984.

Furthermore, a positive finding of feasibility will require additional advance planning funds in the amount of $1,500,000 in FY 1984.

Attached are several resolutions in support of CENDAK which were recently passed by the South Dakota legislature and the Oahe Conservancy Subdistrict.

I wish to thank the committee for permitting me to present this written statement. Please contact me if additional information is desired.

HOUSE JOINT RESOLUTION NO. 1035

A JOINT RESOLUTION, Urging Congressional support for the CENDAK irrigation project.

BE IT RESOLVED BY THE HOUSE OF REPRESENTATIVES OF THE STATE OF SOUTH DAKOTA, THE SENATE CONCURRING THEREIN:

WHEREAS, the CENDAK Water Supply System, Inc., a South Dakota nonprofit corporation comprised of farmers and ranchers in central South Dakota, has proposed the development of a major irrigation project, and

WHEREAS, the CENDAK project would provide substantial economic benefits through livestock stabilization as well as rural and municipal drinking water, recreation and wildlife benefits for the state and Nation, and

WHEREAS, the CENDAK Water Supply System, Inc. has raised approximately $300,000 in local interest contributions to support development of the CENDAK project, and

WHEREAS, Governor William Janklow and the State Legislature have approved placing the CENDAK project on the list of 18 high-priority water projects included in the State Water Plan, and

WHEREAS, the South Dakota Department of Water and Natural Resources has spent considerable time and financial resources including the provision of a $300,000 loan to support development of the CENDAK project, and

WHEREAS, the United States government has not fulfilled its obligation as provided by the Flood Control Act of 1944 to compensate South Dakota for the 500,000 acres of land lost due to construction of the main stem dams on the Missouri River,

NOW, THEREFORE, BE IT RESOLVED, by the House of Representatives of the Fifty-eighth Legislature of the state of South Dakota, the Senate concurring therein, that the U.S. Congress support funding in fiscal year 1983 and fiscal year 1984 at an adequate level to insure the timely completion of all CENDAK feasibility studies and advanced planning reports necessary for CENDAK development.

STATEMENT OF MORRIS KURLE, CHAIRMAN, WEB WATER DEVELOPMENT ASSOCIATION, INC.

The WEB Water Development Association, Inc. would respectfully request favorable consideration by the Congress for $16,022,000 in fiscal year 1984 for continued construction funding of the WEB Rural Water Project, located in north-central South Dakota.

Summary

The WEB Rural Water Project involves the construction of an intake site, a treatment plant, pumping plants, and a 3,600 mile pipeline distribution system to provide domestic water to all or parts of 10 counties in north-central South Dakota. The project could serve approximately 30,500 people, including 17,400 municipal residents in 51 towns, 12,400 rural residents at 3,000 rural taps, and 700 rural North Dakota residents through the State Line Water System as a bulk user. In addition, the system would provide livestock water use equivalent to 516,000 head of cattle.

Detailed planning on the project has begun, with $1,900,000 in federal funding previously appropriated being made available for preconstruction activities. Department of Interior Officials have informed Senator James Abdnor that $2.0 million in construction funding is available for WEB in the 1983 "Jobs Bill". Detailed plans and specifications are being prepared by WEB's consulting engineers with review by the Bureau of Reclamation, and it is anticipated that construction will begin on Phase I of the project in June, 1983. A project schedule submitted to the Bureau of Reclamation on March 24, 1983, up-dated to reflect "Jobs Bill" funds, shows that the entire project could be completed and be made operational by December, 1988, assuming construction begins in FY-1983 and funding were provided by Congress. A summary of the proposed project schedule, shown in millions of dollars, follows:

	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987	FY 1988	TOTAL
Total Funds	*$4.533	$16.189	$29.343	$28.392	$19.623	$1.920	$100,000,000
Local Funds	$ .633	$ .167	$ 1.343	$ .553	$ .554	$ .750	$ 4,000,000
Federal Funds	**$3.900	$16.022	$28.000	$27.839	$19.069	$1.170	$ 96,000,000

(*includes $.241 million in previous expenditures for eligible costs)
(**includes $2.0 million in funds available through the 1983 "Jobs Bill")

Project facilities include a six million gallon per day system, including an intake structure and pumping stations at the Missouri River-Lake Oahe Reservoir, a water treatment plant, 125 miles of main transmission pipeline, 307 miles of secondary transmission pipeline, and 3,170 miles of smaller distribution pipelines. The estimated project cost is $100,000,000 as indexed to an October 1984 price level by the Bureau of Reclamation. The estimated average rural household or farm water bill would be $50 per month, which is high, when compared to water costs on other operating systems in the State. Water costs for municipal users would be based on the rural rate and would vary depending upon service needed.

Of the 51 towns which could receive service, 34 presently maintain water systems which have three or more undesirable constituents. The primary MCL (maximum contaminent level) for fluoride is exceeded in 12 systems, the secondary MCL's are exceeded in 13 systems for chloride, 20 systems for manganese, 30 systems for sulfate, and 34 systems for TDS. Eleven systems have hardness which exceeds 300 ppm and 13 systems have sodium levels exceeding 250 ppm. Alternatives for municipal water, such as desalination, were evaluated in the 1977 engineering report, and were found to be less feasible than a Missouri River Pipeline. Few rural water supplies have been sampled, but it is felt chemical quality of available groundwater experienced by rural residents would be comparable to municipal water supplies. Studies in rural areas of South Dakota have shown significant numbers of farm wells contaminated by nitrate and bacteria, and it is felt similar problems exist in the WEB service area.

Authority

The WEB Rural Water Project was authorized under Section 9 of Public Law 96-355, in September, 1980 (94-Stat. 1175, 1176), and was reauthorized by Public Law 97-273 in the 97th Congress. The legislation was approved by the U.S. Senate in August, 1982, and signed in to law by President Reagan on September 30, 1982. The first section of the Act makes available $1.9 million appropriated in fiscal year 1981, for which costs have been incurred by project sponsors and the Federal Government.

History

The economy of the State of South Dakota, and the WEB Project service area, is more dependent on agriculture than any other State in the Country. The State's climate is one of recurring drought cycles aggravated by limited supplies of poor quality groundwater for livestock and human consumption.

Congress recognized these problems when it initiated the Flood Control Act of 1944, P.L. 78-534, U.S.C. 701-1, which approved a plan to develop for beneficial use the waters of the Missouri River. In order to control the flooding in the lower Missouri River Basin, a series of massive mainstem dams were constructed on the upper reaches of the Missouri River, inundating millions of acres of productive farm and ranch bottom land. In return, upper Basin States were to receive substantial water development to stabilize and ensure the long-term economic growth of the region. South Dakota sacrificed 536,875 acres of productive river bottom land to Missouri River reservoirs which provide much needed flood control and protection largely to States below Sioux City, Iowa, and benefit navigation. South Dakota has received hydropower and some recreational benefits as a result of the huge reservoirs, but no federally assisted irrigation or domestic water service has been developed under the Act.

Continued federal funding of the WEB Rural Water Project would enable South Dakota to receive some compensation for the sacrifice made by the State as a result of the Pick-Sloan Missouri River mainstream dams.

Background

Public Law 96-355, as amended by Public Law 97-273, authorized the appropriation of $68.1 million (adjusted to reflect ordinary fluctuations in construction costs) for the construction of the WEB Rural Water Project. The first section of the Act also made available for obligation $1.9 million appropriated in fiscal year 1981. As provided in Section 9 (e) of the Act, such funds shall be made available in the combination of grants and loans that would provide grants of not less than 75 percentum of eligible development costs and such loans as may be necessary to plan and construct the project. The authorization report was based on a loan interest rate of 5%.

Project Features

Project design is based on two engineering studies, a Conceptual Study completed in 1977, and the "WEB Rural Water Development Project Summary Report" completed in January, 1980. Intake facilities would be constructed on the Lake Oahe Reservoir under the permit process of the U.S. Corp of Engineers. A 3.8 mile raw water line would be constructed from the intake structure to the treatment plant. The treatment plant will be constructed in stages to allow for Phase construction of the project.

Other project features would include 125 miles of main transmission pipeline of from 27 to 14 inch diameter, 307 miles of secondary transmission pipeline of from 14 to 4 inch diameter, and 3,170 miles of distribution pipeline of from 5 to 1½ inch diameter.

Reservoir storage would include a main reservoir at a high elevation point near the Missouri River which could be constructed in stages to facilitate phased construction. There would also be five secondary reservoirs, and 16 secondary pumping stations.

At present 41 towns have either signed contracts for water service, or have indicated that they will do so. Hookup fees have been collected for water service to 3,011 rural taps. Final plans and specifications are being completed by the project engineers and will be approved by the Bureau of Reclamation. Bids on the first Phase of the project are proposed to be let in May, with construction contracts to be awarded in June, 1983.

Organization and State / Local Support

The WEB Rural Water Project enjoys the full support of the South Dakota Congressional Delegation, Governor William Janklow, and the South Dakota State Legislature. The project is included in the South Dakota State Water Plan as a priority project for development. The State of South Dakota has made available $600,000 in funding for the project, and the Oahe Conservancy Sub-district, which is a regional water district established in South Dakota law, has contracted to provide $3,100,000 in grant funds. The WEB Water Development Association, which serves as a local sponsor for the project, has collected over $660,000 in final hookup fees from rural users to be used for construction costs. The Association has also collected and expended over $241,000 in local funds for project feasibility studies and general planning and development of the project. The only federal funds expended toward preauthorization planning and study were some $19,000 in funding provided by the Old West Regional Commission.

The WEB Water Development Association, Inc., was organized in 1975 and originally included the counties of Walworth, Edmunds, and Brown (thus WEB). Additional interest developed as the project feasibility was explored, and parts of the counties of Campbell, McPherson, Day, Spink, Faulk, Potter and Hand were added to the project area. The WEB Water Development Association is a non-profit corporation organized under South Dakota law, and is governed by a nine member Board, including six rural Directors, and three municipal Directors.

As provided by the authorizing act, the Bureau of Reclamation has oversite over construction of the project. The U.S. Department of Agriculture recognizes the need for the WEB Rural Water Project in the area, and fully supports its construction as does the U.S. Environmental Protection Agency. The USDA supports the effort to develop a more dependable water supply to meet the needs of agricultural and rural areas and are providing assistance when requested by the Department of Interior.

STATEMENT OF PAUL RILEY, GENERAL MANAGER, OAHE CONSERVANCY SUB-DISTRICT

Dear Senator,

It is my privilege to announce that the Oahe Conservancy Sub-district, a political sub-division of the sovereign State of South Dakota, has adopted formal resolutions in support of continued federal funding for the CENDAK, WEB and Garrison Diversion water projects.

By unanimous resolution at its regular meeting of March 22, 1983 the Oahe Conservancy Sub-district Board of Directors adopted its formal position favoring continued funding for the WEB Water Pipeline Project and the proposed CENDAK Irrigation Project.

Despite some concerns about the Garrison Diversion unit in North Dakota causing additional flooding along the James River within the State of South Dakota, a majority of the Oahe Conservancy Sub-district Board has adopted an official position supporting continued funding for the Garrison Diversion unit of North Dakota in FY1984 as requested by President Reagan.

It is the official position of the Oahe Conservancy Sub-district Board of Directors that continued federal funding of the above mentioned projects and other water development projects in the upper Missouri Basin is a unique obligation owed by the United States Government to the four Dessert Land Act States of North Dakota, South Dakota, Wyoming and Montana.

The Oahe Conservancy Sub-district Board of Directors urges Congress to fulfill this unique obligation to the Upper Missouri Basin States which have sacrificed millions of acres of their most productive land so that their downstream sister states may not be repeatedly flooded each spring throughout Missouri and Mississippi drainages.

Please find the above mentioned resolutions of support attached to this position statement.

Resolution # 83-3

WHEREAS, the State of South Dakota gave up 509,000 acres of Missouri River bottomland for flood control benefits to lower states, and;

WHEREAS, the State of South Dakota was promised irrigation and other benefits in return for that loss of land, and;

WHEREAS, irrigation is not only a local benefit and a Sub-district benefit but also a statewide benefit, and;

WHEREAS, the CENDAK Project located in the southern half of the Oahe Conservancy Sub-district has broad local and statewide support, and;

WHEREAS, the CENDAK Project would provide water to irrigate approximately 400,000 acres of land, and;

WHEREAS, U.S. Senate bill 1553 authorized study funds for the CENDAK Project, and;

WHEREAS, the Governor, the South Dakota State Legislature and the Board of Water and Natural Resources have endorsed and provided study funds for the CENDAK Project;

NOW THEREFORE BE IT RESOLVED that the Oahe Conservancy Sub-district supports present efforts to determine whether the CENDAK Project is feasible.

Adopted this 22nd day of March, 1983.

Ronald Frankenstein

Ronald Frankenstein, Chairman

Dale Hargens

Dale Hargens, Secretary

Resolution #83-4

WHEREAS, the WEB Pipeline Project was authorized under Public Law 96-355 for construction purposes, and

WHEREAS, the WEB Project is included as an endorsed project of the South Dakota Water Plan, and

WHEREAS, the WEB Project has the endorsement of the S.D. State Legislature, Governor William Janklow, and the South Dakota Congressional Delegation, and

WHEREAS, the WEB Project would benefit not only users in the WEB area but would also benefit the Oahe Sub-district and the State of South Dakota, and

WHEREAS, the WEB Project would provide Missouri River water to 3,000 rural hookups and up to 40 to 50 towns in the Oahe Sub-district area with better domestic water,

THEREFORE BE IT RESOLVED, that the Oahe Conservancy Sub-district Board supports WEB's request for FY84 funding and request congressional support of such funding request.

Adopted this 22nd day of March, 1983.

Ronald Frankenstein, Chairman

Dale Hargens, Secretary

WYOMING WATER RESOURCE PROJECTS

Senator ABDNOR. Before calling our next witness, I want to place in the record a statement submitted by Governor Herschler of Wyoming.

[The statement follows:]

STATEMENT OF GOV. ED HERSCHLER OF WYOMING

Mr. Chairman and Members of the Committee:

Water development continues to be a major concern in the State of Wyoming and throughout the arid West. Energy development with its associated population results in an ever-increasing demand being placed on our limited water resources. Development of our water resources is of prime importance to people of this State and to this Country if it is to meet its energy needs.

Water development is a high priority issue in Wyoming. The Wyoming Legislature adopted my water development program during the 1982 Legislative Session. Twenty-nine water projects were selected for study and possible construction. Seven projects were added during the 1983 Session, two were authorized for construction.

The Wyoming Legislature appropriated $47 million in the 1982 Session for State participation in the enlargement of Buffalo Bill Dam on the Shoshone River. As of this date, a minimal amount of Federal funds have been appropriated for the enlargement. I would hope that funding for this joint venture is forthcoming soon.

There are several other projects in the State and region that may be candidates for State-Federal cost sharing. However, Wyoming's commitment to the Buffalo Bill Enlargement of approximately 44 percent of the total project cost should not be considered a precedent for cost sharing in other reclamation projects in the West. Wyoming, as well as other states in the West, will not be able to participate to this extent in most future water development projects.

We would also urge that funding be continued under the Construction Program for Dam Safety and Irrigation System Rehabilitation work throughout the State. Investment in these activities is justified to protect the much larger Federal and State investment in the projects. Funding for the Bureau's Operation and Maimtenance Program is necessary for the same reason.

General investigations conducted under the Planning Program of the Gureau or Reclamation will be of increasing importance in the future as demands for water and power grow. The data collected in these investigations is useful even if the project under investigation is determined to be infeasible.

The State of Wyoming continues to support the reclamation program of the Bureau of Reclamation. The benefits which have accrued to the Nation since the inception of the program far outweigh the cost to the Federal government and the states.

Thank you for the opportunity to present this statement for the record.

WATERLOO LOCAL PROTECTION PROJECT

STATEMENTS OF:

LEO ROOFF, MAYOR, WATERLOO, IOWA

DALE C. MERCER, ADMINISTRATOR, WATERLOO'S COMMUNITY DEVELOPMENT BOARD

FEDON N. PETRIDES, CONSULTING ENGINEER

Senator ABDNOR. Now, our next witness is Mayor Leo Rooff of Waterloo, Iowa, and Dale Mercer, city administrator.

Gentlemen, will you kindly come forward.

Mayor ROOFF. Mr. Chairman, I am Mayor Rooff from Waterloo, Iowa. Senators Jepsen and Grassley had been expected to be here today, but they were called away on some very important business that they had to take care of and it deals with the budget, so we said that we would try to carry the ball for those two.

Senator ABDNOR. Your two Senators have a great deal of respect and admiration in the Congress. I know they are sorry, too, they couldn't be here with you.

Mayor ROOFF. We would like to begin by thanking you for allowing us a few moments before you. We promise to keep our remarks brief.

Senator ABDNOR. Again, I will say that anything you have in writing will be made a part of the record.

Mayor ROOFF. We have turned over to the staff members our complete statement.

But I want to hit upon just one thing and that is the partnership that our community has had with the Federal Government for a number of years and that is the funding and construction of our flood control system that will prove to be preventing more devastating floods to the city of Waterloo in the future than we have been subjected to in the past.

In 1961 and 1962 there were floods of horrendous nature and a great deal of the city was sandbagged and only because of the youths from the high school and a number of other volunteers could we save the city at that time. Several million dollars of Federal funds have been spent and we are now close to the tailend of the entire project. We have work yet to do and we would like to once again remind you and the committee that we had this partnership going where we were not in here asking you to do something for us or asking you to pay the entire bill. We are here asking that you make the appropriations that we have requested and we will pick up part of that cost. We have done that in past years and our city has spent, even though it only has a population of 75,000, a few millions of dollars of our own funds that are made available to us in the form of taxes from the people from Waterloo so that we could carry our fair share of that load and we urge you to continue the funding of this so we can finish the program.

Mr. Mercer, do you have anything?

Mr. MERCER. I would like to thank the committee and staff for their assistance in the past. We really appreciate it.

Senator ABDNOR. Thank you.

[The statements follow:]

STATEMENT OF LEO P. ROOFF, MAYOR, WATERLOO, IOWA

Mr. Chairman and Members of the Committee:

I am Leo P. Rooff, the Mayor of the City of Waterloo, Iowa. I reside at 510 Frederic Avenue, Waterloo, Iowa.

I am accompanied today at this hearing by Dale C. Mercer, 1130 Ora Drive, Waterloo, Iowa, a member of the Board of Directors of the Water Resources Congress and Administrator of Waterloo's Community Development Board; and Fedon N. Petrides, 3507 Augusta Circle, Waterloo, Iowa, President of Brice, Petrides & Associates, Inc., consulting engineers, who have prepared statements for the record. Messrs. Mercer and Petrides have been closely involved in our Flood Control effort since its inception.

We are pleased to have the opportunity to appear before the committee to inform you of our activities, our needs in the area of flood control, and to answer any questions you might have regarding our Local Flood Control Project.

The City of Waterloo experienced two of the most serious floods in its history brought on by a rainfall deluge in June and July 1969, during which millions of dollars worth of property was damaged and the City was placed in serious economic jeopardy. In 1961, 1962, 1964, 1965, and again in 1968, the City of Waterloo was declared a major disaster area by Presidents Kennedy, Johnson, and Nixon. Millions of dollars in emergency Federal financing have been poured into the City during these years to supplement the local expenditures involved in the flood recovery effort. During these tragic experiences, the rale of our people was high and the cooperation of the Federal and State officials was outstanding. The events of the summer of 1969 brought home the necessity of accelerating Public Works and Capital Improvements Programs to be coordinated with the Local Flood Control Program.

In comprehensive discussions carried on with the U. S. Army Corps of Engineers and with other experts in the field of flood control, we concluded that the best tools available to the City of Waterloo in carrying out a flood control program to a successful conclusion, would be to combine it with an Urban Renewal Program, extensive water and sewer installations, a flood plain management program, an increased park and open spaces project, and revitalization and reconstruction of our center city on either side of the Cedar River.

The principal reason we advanced the two programs of flood abatement and urban renewal simultaneously is that from the point of cost effectiveness the development of both programs would permit a level of planning and execution that would be most helpful to the locality and would provide the best utilization of local and Federal funds. Coordination of these two unique programs prevented duplication of efforts.

The Waterloo Local Flood Protection Project was authorized by the Flood Control Act of 1965, Public Law 89-298, in accordance with the House Document No. 166, 89th Congress, st session.

1982 was a year of continued flood control activities by the Army Corps of Engineers. Additional contracts were awarded by the Corps of Engineers bringing the total Corps construction costs to $41.2 million for the project to date. Private development as part of the Local Flood Control and Redevelopment efforts continued. Already the 126 acre industrial park which is a part of the unique program is producing environmental gains seldom achieved through standard industrial programs of this magnitude. Altogether 1,000 acres of park land, most of it in the flood plain, have been retained for permanent public use.

The citizens of Waterloo join me in thanking you for this invitation to appear as "outside witnesses" in support of a request of continued construction appropriations for the Waterloo Local Flood Control Project. The City is continuing the acquisition of right of way to enable the Corps of Engineers to maintain their construction schedule.

One of the tributaries to the Cedar River is Blowers Creek. Major flooding in the Blowers Creek watershed has occurred in recent years (1968, 1979, and 1980). This flooding has caused significant property damage and hardship to the affected property owners. In the past, rescue operations during the flooding have been required to prevent potential loss of life.

With an investment of Federal and Non-Federal funds totaling more than $60 million for protection from flooding by the Cedar River and Black Hawk Creek, flooding through the "back door" by Blowers Creek cannot be permitted. The Corps of Engineers recognized the impact Blowers Creek flooding would have on the Local Flood Control Project and the community and developed a Flood Protection Plan for Blowers Creek. Mr. Chairman, the City of Waterloo supports the request of the U. S. Army Corps of Engineers budget request of $2 million for F. Y. 1984.

The City has entered into an ambitious flood plain management program with the Department of Housing and Urban Develoment, the Iowa Natural Resources Council, the U. S. Army Corps of Engineers, and the Waterloo Board of Park Commissioners. All of the flood plain area of some 600 acres along Black Hawk Creek has been acquired to prevent future encroachment into the flood plain and is being preserved for park and open spaces use.

Mr. Chairman, this program demonstrates that when local interests embark on bold and imaginative plans and exercise strong local control, the result will be maximum benefits to the Federal and Local Governmental bodies and citizens.

We have repeatedly reassured the Government and the U. S. Army Corps of Engineers that we will meet all the local requirements for flood control construction. Well over $18.5 million has been earmarked for this purpose. Land acquisition, new bridges, sewers, street and utility reconstruction has been impressive and has been coordinated with the planning of various Federal and State agencies. Numerous local bond issues have been approved by local voters in the last 14 years. This illustrates the fact that community-wide programs of health services, new schools, new fire stations, and recreational facilities and library, have been favored by the voters to match the ambitious public works and industrial expansion programs being financed in part by Federal programs and private enterprise.

With over 90 percent of the Waterloo project either completed or under contract, we are concerned that the Flood Protection Project remain on schedule and completed at the earliest date feasible. The need has been graphically demonstrated with the Cedar River, Black Hawk Creek, and Blowers Creek exceeding flood stage several times in recent years. The awareness of potential flooding causes us to be grateful to Congress and the Corps of Engineers for the work that has been completed on schedule.

Mr. Chairman, it is imperative that we keep this project on schedule. We believe that our requests have been reasonable and timely. The project has received national attention because of the unique manner in which several Federal agencies, the State of Iowa, and the City of Waterloo have been able to coordinate their work. With this in mind and in the public interest, we respectfully request continued inclusion of the Waterloo Local Flood Control Project in the U. S. Army of Corps of Engineers Capital Improvements Program.

STATEMENT OF DALE C. MERCER, ADMINISTRATOR OF COMMUNITY DEVELOPMENT, WATERLOO, IOWA

Mr. Chairman, my name is Dale C. Mercer and I reside at 1130 Ora Drive, Waterloo, Iowa. I am the Administrator of Community Development for the City of Waterloo. I am appearing today in support of Mayor Leo P. Rooff on behalf of the Waterloo Local Flood Control Project. I am a member of and on the Board of Directors of the Water Resources Congress. The Water Resources Congress, as in the past, continues to whole-heartedly endorse the Waterloo Flood Control Project.

We have been informed that the U. S. Army Corps of Engineers has a capability to gainfully use the appropriation request for Fiscal Year 1984 of $2,000,000 provided in the proposed Budget for continuation of construction of the Waterloo Project. The City has authorized the necessary local funds and has the administrative skills to collaborate with the Corps of Engineers in our flood control effort.

Mr. Chairman, with this in mind, my statement will serve to complete the record of the progress made to date in planning and executing a huge redevelopment and flood control program of significant benefit to the City of Waterloo. The Flood Control-Community Development Project being accomplished in Waterloo has been cited nationally for ecnomic and social betterment in a metropolitan area while reducing local, State and Federal costs.

To date, the Waterloo Flood Control and Redevelopment Agency has made the following progress:

(i) Purchased 772 parcels of land for a dollar amount of $10,952,793. Relocated 513 families and 117 businesses from the flood plain.

(ii) Arranged for and provided direct assistance to families and homeowners desiring to rehabilitate their property.

(iii) An Urban Development Action Grant was recently approved for redevelopment of a part of the Central Business District in the amount of $3,318,500. This has generated over $16,500,000 in private redevelopment. A portion of the private redevelopment was contingent on the Corps of Engineers construction of the flood wall and the City constructing a new bridge. The coordination of and joint funding by the Federal Government, City and private sector will be completed during 1983.

(iv) Construction of a $3.5 million HUD financed Water and Sewer Program coordinated with flood control and community development activities to improve life for all of our citizens has been completed. The first phase of another sewer and drainage project as part of the Local Flood Control Project, estimated to cost $3.2 million, is underway.

(v) Cost of private industrial development, resulting from the combined Flood Control-Community Development projects, either completed or for which commitments have been made, is valued at more than $144 million.

(vi) The City of Waterloo has been certified as eligible for Federal Flood Insurance.

(vii) The City and private sector have combined to form a Redevelopment Authority for the purpose of redeveloping the downtown. This redevelopment plan will involve new buildings, rehabilitation of existing buildings, public improvements and private development to be coordinated with the Flood Control devices through the downtown area.

(viii) Dry Run Creek area residents have been subjected to frequent flooding. The City completed one stage in the Flood Control Project for Dry Run Creek using City funds. A combined effort of the Corps of Engineers and the City provided additional flood control protection for Dry Run Creek residents resulting in cost savings to the Corps of Engineers and the City of Waterloo. The Iowa Department of Transportation will construct another detention basin as part of the Dry Run Creek Flood Control Project in conjunction with construction of a new highway in 1983.

(ix) The U. S. Postal Service recently occupied a new $4 million postal facility adjacent to the flood wall. Coordination in design between the Corps of Engineers and the Postal Service made construction on the site possible and resulted in savings to the Federal Government.

(x) Assumed maintenance responsibilities of those stages of the Flood Control Project that have been completed.

We have appeared before this distinguished committee in previous years and outlined the goals and objectives which we had set for ourselves with the cooperation of local, State and Federal agencies. Many of these objectives have been attained. We have demolished and rebuilt six flood producing vehicular bridges at a level in excess of the 100-year flood requirements on the Cedar River and Black Hawk Creek at a cost of $7,267,073.

Acquisition and project improvements programs must be carefully correlated with flood control design and construction activities. The activities of each program are carefully staged in advance to assure funding availability, eliminate construction conflicts, and institute coordinated design and development results.

Mr. Chairman, I join those who have submitted statements and testimony in support of this project by asking that funds for the continuation of construction now underway be appropriated as part of the 1984 F. Y. Budget. The Waterloo project, combining redevelopment with flood control, is unique in the Nation. Continued funding will assure proper timing, coordination, and could save the public appreciable expenditures in producing the desired beneficial effects. We sincerely appreciate all the assistance provided us. We believe it has been demonstrated the project has considerable merit.

In conclusion, I would remind the committee of the serious detrimental effects experienced by the citizens of this region because of frequent floods resulting in extensive property damage and untold human suffering. We believe that a solution to the past history of economic and human loss can be corrected if additional construction funds for the Waterloo Local Flood Control Project are appropriated during this fiscal year. We are fully prepared to cooperate to achieve these goals. In so doing, we support the objectives of the President and Congress in the development of the F. Y. 1984 Budget.

STATEMENT OF FEDON N. PETRIDES, ENGINEER, WATERLOO, IOWA, COMMUNITY DEVELOPMENT BOARD

My name is Fedon N. Petrides and I reside at 3507 Augusta Circle in Waterloo, Iowa. I am an engineer for the Waterloo Community Development Board and a member of the Water Resources Congress. I am appearing to answer any technical questions pertaining to the flood control, community development, inner-city transportation and other local projects that have been coordinated to provide a unique and widely supported project for Waterloo.

I am pleased to submit to your committee this prepared document in support of the statements of Mayor Rooff of Waterloo, Iowa, and Mr. Mercer, Community Development Administrator. The feeling of other groups and individuals that have indicated a tremendous support for the Waterloo Flood Control Project are also reflected in the statements.

The City of Waterloo has contributed to the coordinated effort with the U. S. Army Corps of Engineers (Rock Island District) by funding a Central Business District Planning Study, Dry Run Creek Flood Control Study, Blowers Creek Flood Control Study and studies of other drainage areas in the City. Community participation and input were received as part of these studies through meetings and surveys for the planning of the flood control works. The City has also complemented the Federal Flood Control Project by construction of a locally-funded multi-million dollar Storm Sewer Detention Flood Control Project on Dry Run Creek to control "behind the levee" flooding.

Several alternate flood control concepts were evaluated with input provided from community-wide and "interested citizen group" meetings. As a result of the Central Business District Planning Study, a very aesthetically desirable concept, acceptable to the community and the U. S. Army Corps of Engineers, was developed for critical areas of the flood control works. This concept blends the proposed works with the other downtown improvements. Six new locally-funded bridges which are a part of the Flood Control-Urban Renewal Plan have been completed. These bridges replaced old, low-arch bridges which were an obstruction to floods. An additional new bridge is currently under design with construction to begin in 1983. The design of the bridge and Flood Control device at the site of the bridge is being closely coordinated with the Corps of Engineers.

The Waterloo Flood Protection facility has been designed to join with the Flood Control Project recently completed for our neighboring community of Evansdale. Coordination of the Evansdale and Waterloo Flood Control Projects provided a continuity that reduced the Federal cost of the projects. The City of Waterloo supported this joint and continuous concept of flood control as a cost effective solution beneficial to all parties.

To conclude, Mr. Chairman, I join with other witnesses in support of this project by asking the appropration of construction funds as soon as practical to continue construction of a project unique in concept, performance, and public acceptance. We are prepared now, as we have been in the past, to cooperate with the U. S. Army Corps of Engineers to accomplish this goal.

Your favorable consideration of the funding request will prevent loss and damage to property, danger to human life and other suffering that so many times has plagued our community during floods.

Thank you for the opportunity to present my statement to this committee.

RIGHTS-OF-WAY ACQUISITION

Senator ABDNOR. Let me ask you, do you anticipate any problems in providing the right-of-way as required for construction?

Mayor ROOFF. No, sir. Once in a great while we have a resistance on the part of someone that perhaps we need their property. But we stand ready to condemn, if necessary, because we want to protect the majority. But in past years we have had no problems at all. We funded their right-of-way, purchased and we will continue to do so.

PICK-SLOAN MISSOURI BASIN PROGRAM

Senator ABDNOR. Mr. Mayor, I am going to ask you one question because it is something that weighs heavily on my mind as some of my neighboring States come before this committee and the other committees I chair, when it comes to supporting worthwhile water projects like you have. But have you ever heard of the Pick-Sloan program established by the 1944 Flood Control Act?

Mayor ROOFF. I am not too well aware of that.

Senator ABDNOR. The State of Iowa and several other States along the Missouri River have received a great deal of benefits at the expense of the upstream States like South Dakota and North Dakota. In addition to flood control benefits, the Pick-Sloan program has greatly enhanced downstream navigation and has provided substantial hydroelectric power of very low rates. In the meantime, my State has lost over 500,000 acres of our prime land in conjuction with the construction of the four Missouri River mainstream dams. We have no navigation industry, which they do have in Iowa and the downstream States, and we have very little hydropower. At the time the Pick-Sloan program was passed, we were promised irrigation to replace those 500,000 acres that my State lost, and yet today we have not received one irrigated acre under the Federal reclamation program.

To compound this situation, Iowa and other interests filed a lawsuit against my State to prevent South Dakota from using a very small portion of the Missouri River water for the ETSI coal supply pipeline. An Iowa Congressman continues to vote against water projects in South Dakota.

I recognize that the Waterloo flood control project is not located along the Missouri River, but I do represent my State. In all fairness, how will you justify, speaking only for myself and my constituents, not the committee, why I should go out and support even good projects like yours, when Iowa representatives are continually giving us trouble on good South Dakota projects? Do you have any suggestions? I would like to hear what you might propose we might do to get some cooperation.

Mayor ROOFF. I guess if I were in your—Mr. Mercer reminded me he is a member of the organization that supports efforts in your State.

Senator ABDNOR. Thank you. You speak loud and clear to the rest of those Iowans.

Mayor ROOFF. I do have a couple of ideas.

Senator ABDNOR. Before you leave town, you stop and talk to the Congressman. We would appreciate that. [Laughter.]

Mayor ROOFF. I would merely suggest that, No. 1, that a Congressman who votes against your project is not the Congressman who represents the city of Waterloo, Iowa.

Second, the fact that we are one of the few areas that are willing to pick up our fair share of the cost—which really means that we subscribe to the parternship theory of big government, small government, private enterprise, and John Doe public. We are all in this thing together if we can all carry our fair share of the load. This makes our projects worthwhile, it makes them fundable, and it certainly makes them defendable.

Senator ABDNOR. The administration has proposed cost sharing of which I am sure you are aware. Would your city and those involved in the project be able to pick up that extra cost if that were to come about?

Mayor ROOFF. Over the past 10 years we have picked up—Mr. Mercer correct me—something close to $10 million. I guess I can sit here and smile, but we are way ahead of the administration. We have been cost sharing for 10 years.

We put in, Mr. Mercer tells me, about 30 percent of what the Federal Government has.

Senator ABDNOR. Thirty-five.

Mayor ROOFF. We are a number of years ahead of the administration.

Senator ABDNOR. Thank you. You did an excellent job of stating your case.

Mayor ROOFF. I catch a little flack because taxes have to rise, but somebody has to pay the bill. The taxpayer is the only guy we keep going back to. He wants the project, he wants the service, so he is going to pay for it.

Thank you.

CORPS DREDGING ACTIVITIES

STATEMENT OF J. A. (JACK) DOWNS, PRESIDENT, NATIONAL ASSOCIATION OF DREDGING CONTRACTORS

ACCOMPANIED BY:

ERIC TANBERGER, VICE PRESIDENT, DEANE DREDGING OF NEW ORLEANS

WARD EIGER, REPRESENTATIVE, NATIONAL ASSOCIATION

Senator ABDNOR. Our next witness is Jack Downs, president of the National Association of Dredging Contractors.

Mr. Downs, we welcome you to the committee. I see you have others with you. Would you care to introduce your associates.

Mr. DOWNS. To my left I have Mr. Eric Tanberger, vice president of Deane Dredging of New Orleans; to my right, Ward Eiger, representative of the national association.

Senator ABDNOR. We welcome you all to this committee. Thank you.

Mr. DOWNS. Senator, we appreciate being here, the opportunity to come here, to talk to you for a few moments. We have submitted a more detailed statement.

Primarily our message coming here is to say thank you for the efforts of the past of this committee and where we are today. Almost completely that is what I am here to say.

MINIMUM DREDGE FLEET REQUIREMENTS

The report of the Corps of Engineers on the minimum dredge fleet requirements has been transmitted to the Congress. Our association fully supports the findings and conclusions of the report. The final configuration of the Federal minimum fleet consists of four hopper dredges and six nonhopper dredges and is totally in accord with our hopes.

We also fully support the CERF program. The Corps of Engineer reserve fleet program as developed by the Corps for civil reserve fleet augments the Corps minimum fleet. This concept was successfully tested during a recent worldwide defense mobilization exercise and we hope it will be fully augmented by the end of this year.

Since the passage of Public Law 95–269 our industry, the dredging contractors, has developed approximately a quarter of a million dollars in new hopper dredge equipment. The combined hopper dredge fleet today for next year, two dredges presently being built, will be completed, will provide a total hopper capacity of approximately 75 percent more than the hopper dredge capacity of the Corps of Engineers roughly 10 years ago, available greater than that in the 1975–76 era.

NONHOPPER DREDGE FLEET

Industry during this period also built new capability for its nonhopper dredge fleet. The nonhopper dredge fleet of private industry now totals something like 180 major dredges. And as an aside at this point, we would like to point out that the industry today has more than sufficient existing hopper and nonhopper dredge capacity to handle any anticipated deep-draft port construction for the remainder of this decade.

This capacity certainly will include those ports that have been spoken about, Hampton Roads, Mobile, New Orleans, Baltimore, Galveston. The Corps has confirmed our industry capacity to handle this work.

We also want to assure the committee that if additional hopper or nonhopper dredges are required to meet future market requirements, the private dredging industry stands ready to make the necessary capital investment to build any new dredges to meet those needs.

I think our record in building hopper dredges over the past 7 or 8 years proves our willingness to meet such requirements.

I said in the beginning, we came here almost primarily to say thank you for the efforts in the past; we do want to put a little bit to the future. We certainly think it is vital to our interests to proceed with our modernization and improvements of our ports as rapidly as possible. We certainly urge the committee to assist us in every way they can to appropriate sufficient funds to initiate urgently required deep-draft port construction in fiscal year 1984 if that would be possible.

Again we thank you for the opportunity to be here and thank you, sir.

Senator ABDNOR. Thank you for your testimony and your comments. We hope we can arrive at some kind of cost sharing and some means of bringing about the deepwater ports that we are working for. Hopefully, this year we will get our act together and work out the differences, because I agree we need to get on with this.

You are to be commended for the way your association has come forth with the dredging equipment like you have.

Now, is your equipment concentrated on the gulf coast or do you have some spread out and on the west coast?

Mr. DOWNS. The new hopper equipment is spread out across the country. Some of it has worked on the west coast.

Senator ABDNOR. There is a hopper dredge capability on the west coast?

Mr. DOWNS. There is none at the moment; it moved out there because of a total lack of opportunity to put it to work. There are several contracts for bid there in the future and I am sure there will be an interest on the part of the industry. If the work is there, the dredges will be there, Mr. Chairman.

For instance, on the Great Lakes this winter there has been one of the concerns; kept a hopper dredge on the Great Lakes this winter in order to be available this spring to meet any requirements. So far, there has not been any work advertised in the Great Lakes, but the dredge is there.

I am sorry, there is a new dredger. There is a hopper dredge on the west coast. The *Manson* dredge is on the west coast; there is work out there and they are building a second hopper dredge on the west coast. In addition, there are presently two hopper dredges on the coast, or one active and one building, which will be ready some time this season.

Senator ABDNOR. What do they cost?

Mr. DOWNS. These dredges can cost anywhere from the middle $20 million on up to $50 or $75 million, depending on the size and sophistication. I can't really tell you but that is the range.

EXCESSIVE BID BY PRIVATE INDUSTRY

Senator ABDNOR. Mr. Downs, in early testimony before this subcommittee, the Corps indicated that some of the recent bids from private industry on the west coast far exceeded the Government estimates. Can you make any comment on this?

Mr. DOWNS. I only know of the one bid out there. I do know that over the past several years the bids of private industry have actually underbid the Corps of Engineers' estimate without profit by several million dollars. In a recent bid there was one bid on the west coast in which the Corps' estimate was something a little over $2 million. The private contractor was—the 1982 cost for the work was $2.3 million. In 1983 the Corps estimate for the same work was something less than $1 million. It went from $2.3 million back to $815,000. The private industry bid was way over the Corps' estimate. That is now being negotiated, considered, and it is my belief there was something seriously wrong with that. It is now being negotiated on the west coast.

Senator ABDNOR. That $850,000——

Mr. DOWNS. If the same work was done last year—there is something obviously, in my estimate, there is obviously something wrong with the estimate. We do believe this will be worked out in the very near future.

But the track record in the west coast has been—the figures will prove that the Corps' estimates over the past several years, private industry has underbid those estimates by the measure of several millions of dollars in total in the past several years as they brought private equipment into the act.

Senator ABDNOR. Thank you Mr. Downs. We appreciate your coming.

[The statement follows:]

STATEMENT OF J. A. DOWNS, PRESIDENT, NATIONAL ASSOCIATION OF DREDGING CONTRACTORS

The Report on the U.S. Army Corps of Engineers Minimum Dredge Fleet Requirements under P.L. 95-269 was transmitted to Congress last month. I am pleased to report that the dredging industry fully supports the findings and conclusion of the report. The final configuration of the Federal minimum fleet consists of four hopper dredges and six non-hopper dredges.

We also fully support the CERF program developed by the Corps for a civil reserve dredging fleet which would augment the Corps' minimum fleet. This program will enable the Corps to call up industry's dredges for immediate response to national defense or emergency situations. The concept was successfully tested during a recent worldwide defense mobilization. The program will apply to both hopper and non-hopper dredges. It is anticipated that the CERF program for hopper dredges will be fully implemented this Spring and that the program for non-hopper dredges will be implemented before the end of 1983.

Private dredging contractors have invested an estimated quarter of a billion dollars in industry's new hopper dredge fleet. The capacity of industry's 12 hopper dredges in 1984 will exceed by 30% the total hopper capacity of the Corps' 14 hopper dredges operating in 1976. The combined industry hopper dredge fleet (12) and the Corps minimum hopper fleet (4) provides an increase in total hopper capacity of 75% over the Corps' capacity that was available in 1976.

Industry has also built new equipment for its non-hopper dredge fleet. Our non-hopper dredge fleet totals 180 major dredges of all types and sizes. Industry's non-hopper dredge fleet has the capability for dredging over 600,000,000 CY annually. At the present time industry's non-hopper dredge fleet is operating at less than 50% capacity because of the lack of new work.

Our industry has more than sufficient existing hopper and non-hopper dredge capacity to handle anticipated deep-draft port construction to 50 feet or deeper for the remainder of this decade. This capacity would include five major new construction starts such as Hampton Roads, Mobile, New Orleans, Baltimore, and Galveston. The projected dredging requirements for deepening Hampton Roads, Mobile, New Orleans, and Baltimore to 50 feet or deeper totals about 90 million CY annually for the construction period. The annual dredging requirements include 30 million CY to be removed by hopper dredges, or one-third of the dredging requirements, and 60 million CY to be removed by non-hopper dredges. These four principal coal port projects are scheduled to be performed over a 3 to 7-year schedule. The Galveston project would involve dredging of 23 million CY annually over a two-year period if done under a Corps' permit.

The Corps has confirmed the fact that the inventory of industry's dredging equipment is large enough to simultaneously deepen these five ports during a four-year construction period and at the same time perform the normal annual Corps requirements and non-Corps workload.

We want to assure the Committee that if additional hopper or non-hopper dredges are required to meet future market requirements the private dredging industry stands ready to make the necessary capital investment to build any new dredges to meet such requirements.

Unfortunately, there have been no new project authorizations in 6 or 7 years and no new construction starts in 4 years. The impass over cost-sharing must be resolved. It is vital to our national interests that we proceed with modernization and improvements of our ports and harbors as rapidly as possible. We urge the Committee to appropriate sufficient funds to initiate urgently required deep-draft port construction in F.Y. 1984.

COLORADO RIVER STORAGE PROJECTS

STATEMENT OF PAUL L. BILLHYMER, EXECUTIVE DIRECTOR, UPPER COLORADO RIVER COMMISSION

Senator ABDNOR. Our next witness will be Paul Billhymer, executive director of the Upper Colorado River Commission.

Mr. BILLHYMER. I am Paul L. Billhymer, executive director of the Upper Colorado River Commission in Salt Lake City, Utah.

Mr. Chairman, the Upper Colorado River Commission is an interstate compact administrative agency created by the Upper Colorado River Basin Compact. The State members of the Upper Colorado River Commission are Colorado, New Mexico, Utah, and Wyoming. The commission has maintained an active participation in the development, utilization, and conservation of the water resources of the Colorado River basin.

The member States of the Upper Colorado River Commission vigorously support a constructive and progressive water resources development program in the Upper Colorado River basin for fiscal year 1984.

Our interested water people appreciate the privilege of appearing before this subcommittee in support of appropriations of funds to continue the construction and operation of the Colorado River storage project and participating projects.

Our prepared statement, which we have submitted, includes the appropriation requests of our member States. These requests are for water resources development in the States. I have also been requested by the Governor of the State of New Mexico to submit his statement and I have given that to the staff and ask that it be included in the record.

Senator ABDNOR. Fine, it will be included.

ANIMAS-LA PLATA PROJECT

Mr. BILLHYMER. The Governor and I, basically, support the request of the President of the United States with one exception: The request that an additional sum of $1 million be included to start construction on the Animas-La Plata project, a project being built in New Mexico and Colorado. You will hear more about this from the Colorado testimony, so I will not take more time.

Also, I have been asked by the Colorado River Basin Salinity Control Forum to submit its statement requesting appropriations for the salinity in the Colorado River basin and I request it too be included in the record.

Senator ABDNOR. Yes, all of the statements will be made a part of the record.

Mr. BILLHYMER. I will not take more of your time. The Colorado delegation is following me and they have witnesses on the individual projects. I do appreciate being allowed to submit these three statements for the record.

Senator ABDNOR. We are happy to have them, because we want all the information there is.

[The statements follow:]

STATEMENT OF PAUL L. BILLHYMER, EXECUTIVE DIRECTOR, UPPER COLORADO RIVER COMMISSION

I am Paul L. Billhymer, Executive Director of the Upper Colorado River Commission, Salt Lake City, Utah.

Mr. Chairman, the Upper Colorado River Commission is an interstate compact administrative agency created by the Upper Colorado River Basin Compact. The State members of the Upper Colorado River Commission are: Colorado, New Mexico, Utah, and Wyoming. The Commission has maintained an active participation in the development, utilization, and conservation of the water resources of the Colorado River Basin.

The member States of the Upper Colorado River Commission vigorously support a constructive and progressive water resources development program in the Upper Colorado River Basin for fiscal year 1984. Our interested water people appreciate the privilege of appearing before this subcommittee in support of appropriations of funds to continue the construction and operation of the Colorado River Storage Project and participating projects.

Summary of Specific Action Requested

Appropriations of funds recommended by the representatives of the States of Colorado, New Mexico, Utah, and Wyoming for the Colorado River Storage Project and participating projects.

Representatives of each of our member States will be presenting testimony to this subcommittee in support of specific appropriation requests that reflect the official position of each State with respect to the development of water resource projects and programs involving the Colorado River Storage Project and participating projects. Such specific requests will not be repeated here. The Commission supports the appropriation requests submitted by representatives of the member States with respect to water resource projects and programs involving the Colorado River Storage Project and participating projects.

The Upper Colorado River Commission supports the new construction starts requested by our member States because these programs are necessary to develop a water supply in areas of these States. We urge the funding of a viable water resources development program in the Upper Colorado River Basin inasmuch as such projects are capital improvements which have national benefits.

The Upper Colorado River Commission supports the development of the Colorado River Water Quality Improvement Program. This Colorado River Water Quality Improvement Program has received the endorsement of the seven States of the Colorado River Basin and has as its purpose the reduction of salinity in the river system. A more detailed statement on this program will be presented in the testimony of the Colorado River Basin Salinity Control Forum, and the Commission fully supports appropriations for this salinity control program.

Mr. Chairman, on behalf of the Upper Colorado River Commission, thank you for this opportunity to present this statement for the Committee's consideration.

STATEMENT OF GOV. TONEY ANAYA OF NEW MEXICO

SUMMARY

This statement is submitted in support of appropriations for the construction of water resource projects authorized to be built by the Bureau of Reclamation and the Corps of Engineers, for operation and maintenance of projects constructed by these agencies and for project investigations by these agencies.

In general, I support the President's fiscal year (FY) 1984 budget proposals for water resources. However, the President's FY 1984 budget does not include funds for the Animas-La Plata Project, Colorado-New Mexico. I urge that at least $1.0 million be included in the FY 1984 budget to initiate construction activities on this project. The Bureau of Reclamation has, in consultation with the states of Colorado and New Mexico and with local entities who would be the immediate beneficiaries of the project, selected a plan to regulate and deliver a water supply to the areas of use; all work on the environmental impact statement and the definite plan report has been completed. The Bureau has initiated discussions with the local entities on repayment contracts and none of these discussions has been unfavorable. The Colorado Legislature has made available money that can be used to provide funding for the project during construction (up-front financing). The New Mexico Legislature is currently considering legislation to provide money that could be used for up-front financing. The project is in all respects ready for construction and there is a great need for additional water in this area of the two states where oil, gas, uranium and coal development for energy is underway.

STATEMENT

BUREAU OF RECLAMATION

Colorado River Storage Project and Participating Projects

The Colorado River Storage Project Act, which became law in 1956, authorized a carefully planned and farsighted program for the development and use of waters of the Upper Colorado River Basin. To carry this program forward the President has recommended that $166,802,000 be appropriated to the Bureau of Reclamation for FY 1984. This proposal includes $486,000 for design of remedial grouting at Navajo Dam in New Mexico. I support those recommendations.

The President's FY 1984 budget does not include funds for the Animas-La Plata Project a bi-state project in Colorado and New Mexico which was authorized in 1968 by P.L. 90-537. The Bureau of Reclamation has, in consultation with the States of Colorado and New Mexico and local entities who would be the immediate beneficiaries of the project, selected a plan to regulate and deliver water to the areas of use; all the work on the final environmental impact statement and the definite plan report has been completed. In FY 1982 the Bureau initiated discussions with the local entities on the terms and provisions of repayment contracts under which the local entities would repay their allocated share of the construction costs and annual operation and maintenance costs. Those entities have indicated their intent to enter appropriate contracts.

It is our understanding that because of current federal deficits, the Executive Department has taken the position that State or local interests must contribute to the cost of Federal water projects during construction. Accordingly, the New Mexico Legislature is considering whether the State should provide funds for up-front financing during construction of the project to encourage inclusion of this item in the President's budget proposals. The Colorado Legislature has made available money that can be used to provide up-front financing for the project. The project is in all respects ready for construction and there is a great need for the additional water supply which will be made available by the project in this area of the states where oil, gas, uranium and coal development for energy is underway. I urge that at least $1.0 million be appropriated in FY 1984, which together with state funds, would permit construction to be initiated.

I also urge that appropriations for units of the Colorado River Storage Project and Participating Projects in the other Upper Basin States be adequate for orderly project development.

Carlsbad Irrigation Project

The sum of $224,000 is proposed in the President's FY 1984 budget to continue the rehabilitation work on the laterals and sublaterals in the Carlsbad Irrigation Project distribution system. The work, which will be done by the Carlsbad Irrigation District under the Rehabilitation and Betterment Act, will conserve water in the District. I support this proposal.

Tucumcari Project

The sum of $300,000 is proposed in the President's FY 1984 budget to initiate rehabilitation work on the Tucumcari Project distribution system. About 11,000 feet of the main canal will be lined which will conserve water for the project lands. I fully support the amount included in the President's budget for this program.

Brantley Dam and Reservoir

The President's FY 1984 budget includes $12.7 million for construction on the Brantley Dam and Reservoir Project in the Pecos River Basin. The Brantley Project was authorized for construction by P.L. 92-514 in 1972. The basic purpose of the project is the protection of life and property in the vicinity of the city of Carlsbad. The Brantley Dam would replace the unsafe McMillan Dam, which was reconstructed by the U.S. Reclamation Service in 1908, and would provide additional capacity for the storage of flood waters. One percent of the project cost is allocated to irrigation, five percent of the cost is allocated to recreation and fish and wildlife purposes and two percent of the cost is allocated to highway relocation; the balance of the cost is allocated to safety of structures and flood and sediment control. The work proposed for FY 1984 would include acquisition of lands and rights-of-way; final design of the dam and preparation of specifications; contract award for relocation of the AT&SF railroad; construction of a warehouse, shop building and caretaker's residence; acquisition of lands and water rights for fish and wildlife mitigation facilities and other miscellaneous items. I support the President's budget proposal for this urgently needed project.

Central Arizona Project

The Colorado River Basin Project Act, P.L. 90-537 enacted in 1968, authorized construction of the Central Arizona Project in Arizona and New Mexico. The President's FY 1984 budget proposes $165.6 million to continue construction of this project. The Hooker Dam and Reservoir, or suitable alternative, in southwestern New Mexico is authorized for construction as a unit of the Central Arizona Project. The President's proposed budget includes $866,000 to continue Stage II studies on this unit. I fully support the President's budget proposal for funding the Central Arizona Project.

Colorado River Basin Salinity Control Project-P.L. 93-320, Title I

The President's FY 1984 budget includes a total of $21,872,000 for continued construction on the Yuma Desalting Plant and related facilities. I fully support the President's budget proposal for this program.

Colorado River Water Quality Improvement Program

The President's FY 1984 budget includes $11,058,000 for construction of three salinity alleviation units authorized by Title II of P.L. 93-320; the Grand Valley, Paradox Valley and Las Vegas Wash units. The Colorado River Salinity Advisory Council established by P.L. 93-320 recommends that additional amounts be made available to fund the salinity program at an accelerated rate of construction. The Salinity Council recommends that $23,970,000 be included for construction on the authorized Paradox Valley, Grand Valley, Las Vegas Wash and the saline water use and disposal unit. I support the recommendations of the Colorado River Salinity Control Advisory Committee that $23,970,000 be included in the FY 84 budget in order that the construction program may be funded at an increased rate.

The President's FY 1984 budget also includes $4,410,000 for advanced planning of additional units that would improve the water quality of the Colorado River. The salinity concentrations in the Lower Colorado River are approaching levels that are of serious concern in municipal, industrial and agricultural uses. The construction of presently authorized water projects and planned private water development will cause further increase in salinity concentrations in the Colorado River. Completion of advanced planning and subsequent construction of the units proposed for advance planning, coupled with completion of construction of the three units authorized under Title II of P.L. 93-320, will provide the most cost-effective means of making the near-term, salt-load reductions necessary to maintain water quality levels at the 1972 level in the lower mainstem of the Colorado river, while allowing the basin states to develop their compact apportioned waters. The Colorado River Salinity Advisory Council recommends that $7,400,000 be made available for advanced planning and $5,895,000 for plan formulation. I support the Council's recommendation that a total of $13,295,000 be included in the FY 84 budget which will provide for planning on the Lower Gunnison Basin, McElmo Creek, Big Sandy River, Glenwood-Dotsero Springs, La Verkin Springs, Lower Virgin River, Meeker Dome, Price-San Rafael and Saline Water Use and Disposal units.

Closed Basin Division, San Luis Valley Project-Colorado

The President's FY 1984 budget includes $15,155,000 for construction of the Closed Basin Division. Work will include installation of wells, furnishing and installing pumps and prime movers, construction of portions of the canal, lateral, and transmission systems. Land acquisition and archeological mitigation work will also continue. The project will facilitate Colorado's delivery of water to downstream states in compliance with the Rio Grande Compact. I fully support the President's budget for this project.

General Investigations

The proposed Bureau of Reclamation program also includes general investigations of interest to New Mexico. These are: 1) $225,000 to continue the Lake Meredith Salinity Control Project investigation; 2) 270,000 for Environmental and Interagency Coordination Activities in New Mexico; 3) $32,000 for minor work in connection with completed project investigations in New Mexico; and 4) $124,000 to provide technical assistance to the states in the form of expertise in hydrology, engineering or other disciplines to aid the state in water resource planning.

I support funding for a total of $651,000 for the general investigations described above.

Operation and Maintenance Program

I support the President's FY 1984 budget for appropriation for operation and maintenance of Bureau of Reclamation Projects in New Mexico and for projects in adjacent states in which New Mexico has an interest. These include 1) Carlsbad Project, $47,000; 2) Pecos River Basin Water Salvage, $375,000; 3) Rio Grande Project, $2,573,000;

4) Middle Rio Grande Project, $4,807,000; 5) San Luis Valley Project, $342,000; and 6) Soil and Moisture Conservation Programs in New Mexico, $427,000. Also, I support approval of the Bureau of Reclamation's operation and maintenance budget request for Colorado River Storage Project in the amount of $18,700,000.

CORPS OF ENGINEERS

Authorized Surveys

The President's FY 1984 budget includes $530,000 to continue the Corps of Engineers' investigation - Gila River and Tributaries Upstream from Camelsback Dam Site, Arizona and New Mexico. The investigation is to survey the feasibility of providing solutions to the flood problems in the area. I support the proposed budget for this investigaiton.

The President's FY 1984 budget proposes $373,000 to continue the Corps of Engineers Investigation - Colorado River and Tributaries above Lee Ferry, Arizona. At this time the program is primarily an investigation of the San Juan River and tributaries in Colorado and New Mexico. The investigation is being conducted to determine the feasibility of constructing improvements for flood control and related water resource purposes within the San Juan River sub-basin of the Colorado River Basin above Lee Ferry, Arizona. An early completion date for the San Juan River and tributaries portion would be helpful to New Mexico. I fully support the President's budget for this program.

The President's FY 1984 budget includes $150,000 for the Corps to proceed with the authorized survey - Rio Grande and Tributaries, Colorado and New Mexico. The survey is directed at determining improvements for solution of flood problems above El Paso, Texas. I fully support the President's budget for this program.

The President's FY 1984 budget includes $156,000 for advance engineering and design on the Santa Fe River and Arroyo Mascaras project at Santa Fe; I fully support the budget for this project.

Operation and Maintenance Program

I support the President's FY 1984 budget for appropriations for operation and maintenance of Corps of Engineers projects in New Mexico. These include: (1) Abiquiu Dam $837,000; (2) Cochiti Dam $994,000; (3) Conchas Dam $772,000; (4) Galisteo Dam $105,000; (5) Jemez Canyon Dam $200,000; (6) Santa Rosa Dam $463,000 and (7) Two Rivers Dam $146,000.

CONCLUSION

The excellent water resource planning and development work being done by the Bureau of Reclamation and the Corps of Engineers in New Mexico and adjacent states is essential to the welfare of this state and the nation. I sincerely appreciate the opportunity to present this statement in support of approrpiations for the work of these agencies.

STATEMENT OF JACK A. BARNETT, EXECUTIVE DIRECTOR, COLORADO RIVER BASIN SALINITY CONTROL FORUM

In support of and in addition to the President's
1984 Budget Request for Colorado River Salinity Improvement

For the Department of the Interior

Bureau of Reclamation	
Construction	$ 23,970,000
Plan Formulation	5,895,000
Advance Planning	7,400,000
Total	$ 37,265,000

* * * * * * * * * * * * * * *

The Forum members appointed by their governors, represent the states of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming. The objective of the Forum is to provide a basin-wide coordinated approach to controlling salinity of the Colorado River such that salinity concentrations can be maintained at acceptable levels while the states develop their compact apportioned waters. Most of the members of the Forum are from water resource and water quality agencies of state governments. A list of members is attached (Appendix A).

The seven basin states are united in presenting this statement on behalf of appropriations to implement Title II of P.L. 93-320, the Colorado River Basin Salinity Control Act. This basin-wide program will directly benefit 12 million U.S. citizens that use Colorado River water.

The Administration's budget recommends $13,058,000 for funding of Title II of P.L. 93-320 for construction of three authorized salinity control units. They are the Paradox Valley and the Grand Valley Units which are both in Colorado and the Las Vegas Wash Unit in Nevada. The Forum requests that funding be increased above the Administration's request for these three units and also that funds be appropriated for the Saline Water Use and Disposal Unit.

The President's budget recommends $4,410,000 for continuing investigations under the Colorado River Water Quality Improvement Program leading to feasibility reports on other salinity control units. The Forum believes that $5,895,000 can effectively be spent for this planning in FY 84.

The U.S. Bureau of Reclamation (USBR) has requested $530,000 for advanced planning which we request be increased to $7,400,000. Advanced planning funds are needed, we believe, in anticipation of Congressional action on the salinity legislation now before the Congress (S. 752). We further request that, as the proposed legislation moves through the Congress, the appropriation committee consider transferring funds from the general investigations program to advance planning where appropriate.

When the Colorado River Basin Salintiy Control Act was passed by Congress in 1974, it was anticipated that, after some needed investigation, additional and needed cost effective salinity control projects would be identified. The Forum has concluded that there is now enough information collected by the Department of the Interior to warrant the authorization of six additional salinity control units. Legislation has now been introduced by western senators to accomplish this. Those units are: Lower Gunnison Basin Unit, Colorado; McElmo Creek Unit, Colorado; Palo Verde Irrigation District, California; Saline Use and Disposal Opportunities, basin wide; Uinta Basin Unit, Utah; and the Sinbad Valley Unit, Colorado.

The seven Colorado River Basin states worked collectively, under the auspices of the Colorado River Basin Salinity Control Forum, to draft this legislation and have suggested it to Congress. Senate Bill 752 has the unanimous support of the basin states and reflects the concerted effort of those states as they work together to find solutions to the water quality problems of the Colorado River.

The Colorado River Basin Salinity Control Act created an Advisory Council. Members of the Advisory Council are appointed by the basin state governors. The Advisory Council is required to prepare a report to the Administration annually concerning the salinity control program. The 1982 Annual Report, issued in February of 1983, contains detailed budget recommendations. Page 15 of the report outlines the appropriations that the seven basin states feel are necessary for the Department of the Interior, Bureau of Reclamation, in FY 84 for the salinity control program to move ahead. We believe these funds are needed to provide program continuity, and implement needed salinity control measures. As a supplement to this testimony, the budget recommendations of the report are attached (Appendix B). Pages 16 and 17 of the report contain additional funding recommendations for other agencies and departments and are provided for this Committee's information as a part of Appendix B.

We believe that in several areas the Administration's requests for funds are lacking. Failure to provide funds in appropriate amounts now could lead to costly delays and in some cases the opportunities to implement salinity control measures will pass. We can briefly site some examples for your consideration. The legislature of the State of Wyoming recently appropriated over $800,000 to be used with federal funds to investigate the opportunity to beneficially use saline waters from the Big Sandy area of Wyoming. It was anticipated by the Wyoming legislature that funds in at least equal amounts would be appropriated by the Congress. There appears to be an opportunity to dispose of saline waters by cooperative agreements with industries that at this point in time are looking for saline waters for industrial use. Failure to appropriate these needed federal funds at this point in time will result in the passing of an opportunity to work collectively with industry and it will further result in the inability to use the funds that the State of Wyoming has offered in a cooperative cost-sharing proposal.

In southwestern Colorado, Congress has authorized the Dolores Project. There may be an opportunity to combine some of the features of the Dolores Project and proposed features of the McElmo Creek Salinity Control Unit. Residents of the area are anxious to have this opportunity investigated. It is anticipated that there may be significant opportunities to share costs between these two efforts, reduce the total over all cost of the programs and increase the amount of salt that can be removed from the Colorado River system. Failure to appropriate adequate funds at this point in time to further these investigations may result in the passing up of an opportunity for cooperation, savings, and more cost effective salinity control.

Many months ago the Administration formally requested that industries come forward that would be willing to consider cooperative cost sharing joint ventures that would result in an industrial use of saline waters. Some industries have come forward and a note worthy example of this has been the creation of a corporation called Aquatrain. The Aquatrain concept would use saline waters in connection with coal transportation and ultimately provide saline waters for use in thermal electric generating facilities' cooling towers. The companies associated with Aquatrain are now offering to joint venture in the cost of investigating these options. States are expressing a willingness to participate and industries have been identified that may in the near term be able to beneficially use these waters. The Aquatrain concept is of interest to the Colorado River Basin Salinity Control Forum because early estimates indicate that this single project could dispose of 10% to 25% of the total tonnage of salt that must be removed from the river system. Failure to provide adequate federal funds to allow for this joint venture investigation to proceed will result in the termination of this investigative effort and, further, the industrial users will turn to more readily available fresh water supplies.

In the St. George area of Utah a water conservancy district has come forward with a water resource development plan. They propose that their development be designed and constructed in the near future. They have identified a potential way to take the very saline waters of the LaVerkin Springs and dispose of them. They have extended a hand of cooperation to the states and the federal government to explore the possibility of accomplishing this water quality improvement as they proceed with their water development program. Failure to provide funds in the forthcoming fiscal year for this investigation will result in the passage of an opportunity to remove as much as 100,000 tons of salt from the river system annually.

The legislation being considered by the Congress does not ask for an increase in the ceiling of the amount of funds which can be expended under this program as established by Congress in 1974. The addition of six more authorized units, as provided for in S. 752, simply allows the Administration to implement the most cost effective salinity control units.

The requested funds will permit continued planning and construction on three previously authorized units: Paradox Valley, Colorado; Grand Valley, Colorado; and Las Vegas Wash, Nevada. It is essential that construction schedules be maintained and accelerated in order to meet the agreed upon objective of the federal government and the seven basin states. Those objectives are that salinity concentrations in the lower mainstem of the Colorado River be maintained at or below 1972 levels. As required by federal law, the states have reviewed and have formally readopted these salinity objectives in 1978 and 1981.

To maintain levels of salinity concentration, an estimated 2.2 to 2.8 million tons of salt per year, based on USBR studies, must be removed from the river system by about 2010. Unless these standards are met, rising salinity will cause many millions of dollars damage each year in the U.S. In addition, if the Colorado River salinity rises substantially, the U.S. could be faced with renewed water quality negotiations with Mexico. Thus the construction of salinity control units are essential to a large region of the U.S. and can assist materially with international comity with Mexico.

The Colorado River is an interstate and international stream, with most of its drainage area owned or controlled by the federal government. Thus, the heart of the implementation plan lies with the federal salinity control program identified in Title II of P.L. 93-320. Even with this significant federal responsibility, the states have agreed to, and are, reimbursing the federal government for 25% of the costs of the salinity control units constructed under the authorities of P.L. 93-320. This is accomplished through the two Colorado River Basin accounts (the Lower Colorado River Basin Development Fund and the Upper Colorado River Basin Fund).

Passage of the legislation now before Congress and the funding requested in this testimony is essential. The Colorado River Basin Salinity Control Forum urges an appropriation for FY 84 of $37,265,000 for the Bureau of Reclamation to use for salinity control in the Colorado River Basin. On behalf of the seven Colorado River Basin states represented on the Colorado River Basin Salinity Control Forum, I thank you for the opportunity to present this statement.

COLORADO RIVER BASIN SALINITY CONTROL FORUM

Members

ARIZONA:

Wesley Steiner, Director
Department of Water Resources

Ronald L. Miller, PhD, Chief
Bureau of Water Quality Control

Stewart Udall
Attorney at Law

CALIFORNIA:

Walter G. Pettit, Chief, Technical Services Division
State Water Resources Control Board

Myron B. Holburt, Chief Engineer
Colorado River Board of California

COLORADO:

D. Monte Pascoe, Executive Director
Department of Natural Resources

David Robbins
Attorney at Law

Dr. Robert A. Arnott, Assistant Director
Department of Health

NEVADA:

Duane R. Sudweeks, Director
Colorado River Commission of Nevada

Lewis H. Dodgion, Administrator
Division of Environmental Protection

Roland D. Westergard, Director
Department of Conservation and Natural Resources

NEW MEXICO:

Stephen E. Reynolds
State Engineer

UTAH:

Calvin K. Sudweeks, Director
Bureau of Water Pollution Control

Daniel F. Lawrence, Director
Division of Water Resources

WYOMING:

George L. Christopulos
State Engineer

William L. Garland, Administrator
Water Quality Division

Budget Recommendations

The following tabulation displays the Advisory Council's recommendations for fiscal years 1984, 1985 and tentative recommendations for 1986 so that program continuity can be maintained.

	Fiscal Years (In 1000's of $)		
	1984	1985	Tentative 1986
DEPARTMENT OF THE INTERIOR			
Bureau of Reclamation			
Construction			
Paradox Valley	8,270	5,235	5,000
Grand Valley1/	7,625	17,077	21,000
Las Vegas Wash	3,075	4,000	4,000
Palo Verde*	-	-	5,000
Saline Water Use and Disposal*			
Big Sandy River2/	4,500	10,500	1,000
Aquatrain2/	500	1,000	10,000
Subtotal	23,970	37,812	46,000
Advance Planning			
Big Sandy River2/	800	800	-
Lower Gunnison Basin	1,400	1,400	1,400
McElmo Creek	800	1,400	1,400
Uinta Basin	800	1,400	1,400
Palo Verde	500	1,000	-
Saline Water Use and Disposal			
Colorado River Water Quality Office	500	1,000	1,000
Aquatrain2/	2,6003/	600	250
Subtotal	7,400	7,600	5,450
Plan Formulation	5,895	6,285	5,285
TOTAL - USBR	37,265	51,697	56,735

Bureau of Land Management

	(In 1000's of dollars)		
	FY 84	FY 85	Tentative FY 86
Specific Projects			
Sagers Wash, Utah	80	100	100
Leach Creek, Colorado	70	50	50
Subtotal	150	150	150

Additonal Projects			
Pre-project work[4]	120	150	150
Implementation[5]		250	300
Technical Assistance	20	20	20
Subtotal	140	420	470
TOTAL - BLM	290	570	620
DEPARTMENT OF AGRICULTURE			
Agriculture Stabilization and Conservation Service			
Cost Share (75% Fed)6/	10,000	13,500	17,100
Soil Conservation Services			
Technical Assistence6/	1,500	2,700	3,400
Monitoring & Evaluation	700	800	800
Basin Studies 7/	100	200	200
Subtotal	2,300	3,700	4,400
Extension Service			
Education Assistance6/	200	300	600
Agricultural Research Service			
Research Support	750	850	950
Cooperative State Research Service			
Agency Experiment Stations	550	650	750
TOTAL - USDA	13,800	19,100	23,800

1/ Includes initiation of canal and lateral improvements in the area west of Stage 1.

2/ Does not include private-joint venture funding for industrial use of saline water.

3/ Includes $1,900,000 for federal share of EIS.

4/ Includes source identification, feasibility reports, watershed activity plans and environmental assessments in Fiscal Year 1984.

5/ Assumes projects are found feasible.

6/ Implementation Projects

1984	1985	1986
Grand Valley, CO	GV	GV
Uinta Basin, UT	UB	UB
Virgin Valley, NV,AZ	VV	VV
Moapa Valley, NV	MV	MV
	Big Sandy (WY)	BS
		Lower Gunnison (CO)

7/ Basin Studies	1984	1985	1986
	Price-San Rafael, UT	PSR	Supplements
	Palo Verde, CA	PV	PV
	Upper Virgin, UT	UV	

*Assumes Congressional Authorization

The Council appreciates the opportunity to submit its recommendations to the federal agencies.

COLORADO WATER RESOURCE PROJECTS

STATEMENT OF BILL McDONALD, EXECUTIVE DIRECTOR COLORADO WATER CONSERVATION BOARD

ACCOMPANIED BY:

- JOHN MURPHY, CHAIRMAN, ANIMAS-LA PLATA WATER CONSERVANCY DISTRICT
- LEONARD BURCH, CHAIRMAN, SOUTHERN UTE INDIAN TRIBAL COUNCIL
- ERNEST HOUSE, PRESIDENT, UTE INDIAN TRIBE
- JOHN PORTER, COLORADO WATER AND POWER AUTHORITY, DOLORES CONSERVANCY DISTRICT
- DONALD HAMIL, PRESIDENT, LOWER SOUTH PLATTE WATER CONSERVANCY DISTRICT

Senator ABDNOR. We will call Mr. Bill McDonald, executive director of the Colorado Water Conservation Board.

We will ask you all to give your names so the reporter can make it a part of the record.

Mr. McDONALD. Mr. Chairman, my name is Bill McDonald. I am director and secretary of the Colorado Water Conservation Board. It is my pleasure to testify today on behalf of the honorable Richard Lamm, Governor of Colorado, and Mr. Hamlet Barry, who is executive director of the Colorado Department of Natural Resources.

I will provide an overview of the State's request for appropriations and then introduce and call upon the gentlemen at the table with me, who represent two of the major projects in which we have an interest. My testimony, sir, has been provided to the staff for the record and I will summarize.

Senator ABDNOR. We appreciate that. Your entire statement will be made a part of the record, as will the statements of all the other witnesses.

FUNDING REQUEST

Mr. McDONALD. By way of summary, let me say that the State of Colorado supports the President's recommended budget for the Bureau of Reclamation and the Corps of Engineers with four exceptions.

First, we would additionally request appropriations for construction on the Narrows project and Animas-La Plata project, and I would like to return to that in a moment.

Second, we would request funding to continue planning on the proposed Dominguez Reservoir project; and third, we would request additional funding for the Colorado River water quality improvement program, and I will refer the committee to the statement submitted by Mr. Billhymer.

Finally, we would request an appropriations for continuing planning and engineering on the Westerly Creek flood control project in the Denver and Aurora areas.

Let me take time to speak on Narrows and Animas-La Plata.

NARROWS PROJECT, COLORADO

The Narrows project was reauthorized by Congress in 1970. It is an important project to Colorado and it will provide supplemental water to some of our most productive agricultural lands, it will provide municipal water to several rural communities, and it will provide significant recreational efforts to the Greater Denver Metropolitan Area. It will also be a flood control project that will provide protection to downstream communities and farming areas and it is a two-State project in the sense that there are indirect benefits that will clearly accrue to the State of Nebraska.

The project was in construction status in 1977 when it was included in the Carter administration's hit list. At that time, we were active in land acquisition and final engineering. The last 2 years we had funding to update the planning for that project. We are done with that and we are ready to go. We respectfully request that $5 million be appropriated for reinitiation of construction on that project in fiscal year 1984.

ANIMAS-LA PLATA PROJECT

The second project is Animas-La Plata, a project authorized in 1968. It is also a joint bi-State project, Colorado and New Mexico. I would mention to you, Mr. Chairman, that it addresses, among other things, the problems which confront the Indian reservations in the project area. It is an important project to Colorado in that regard in that it clearly holds the potential of helping to resolve Indian reservation rights claims to the mutual benefit of Indians and non-Indians in Colorado.

Other components of that project will serve non-Indian populations, municipal water, and finally the project will significantly strengthen the irrigated agricultural economy of southwestern Colorado.

As with the Narrows, planning and reconstruction activities for the project have been completed. In addition, the necessary repayment contracts have been negotiated and are in order. And in light of that, we respectfully request $1 million be appropriated to initiate construction.

LOCAL COST-SHARING ISSUE

The hiatus we face, Mr. Chairman, is the apparent lack of understanding and agreement as to whether there is or is not up-front funding. If there are to be new requirements for such non-Federal up-front funding, then obviously they need to be defined and the current impasse resolved. We in Colorado are anxious to work with this Congress and this administration in constructively considering solutions to that issue. Should Congress ultimately elect to proceed with non-Federal funding, we wish to emphasize and draw to your attention that Colorado, the

State of Colorado, is prepared to proceed; we have been for a year and a half. The Colorado General Assembly has specifically set aside an authorized fund for the potential final participation in those two Federal projects. Discussions are being held with Department of the Interior in that regard on both projects, but I guess the bottom line, Mr. Chair-man, is that we await congressional direction on how to proceed.

In summary, I would say our level of frustration is high. We have complied with all applicable laws, we held discussions that are being asked by the administration. We have been ready for over 18 months. Still the hiatus seems to be in place. We would like to impress upon you, Mr. Chairman, that we are prepared to cooperatively work with both Congress and the administration seeking a resolution in that issue on any matter appropriate for our participation.

With that, Mr. Chairman, unless you have questions of me, I will conclude my oral comments and introduce the gentlemen with me and proceed from there.

INTRODUCTION OF SUPPORTING WITNESSES

Let me introduce them and we can go down the table from left to right. First the Animas-La Plata, the people scheduled on your witness list, John Murphy is chairman, Animas-La Plata Water Conservancy District; Mr. Leonard Burch, president of the Southern Ute Tribal Council; Mr. Ernest House, president of the Ute Indian Tribe; and Mr. Porter, representing the Colorado Water Resources and Power Development.

[The statement follows:]

STATEMENT OF J. WILLIAM MCDONALD, DIRECTOR, COLORADO WATER CONSERVATION BOARD

Introduction

I am J. William McDonald, Director and Secretary of the Colorado Water Conservation Board. I am testifying on behalf of the Honorable Richard D. Lamm, Governor of Colorado; Mr. Hamlet J. Barry III, Acting Executive Director of the Colorado Department of Natural Resources; and the Board itself, which is the state agency charged with the protection, conservation, and development of the water resources of the State of Colorado.

Summary of Requests

The State of Colorado urges Congress to maintain the funding levels included in the President's recommended budget for the Bureau of Reclamation and the Corps of Engineers. In addition to the President's recommended budget, we respectfully request that the FY 84 appropriations for the Bureau and the Corps include:

(1) appropriations for construction on the Narrows and Animas-La Plata projects,

(2) funding to continue planning on the proposed Dominguez Reservoir project,

(3) additional funding for the Colorado River Water Quality Improvement Program, and

(4) an appropriation for continuing planning and engineering on the Westerly Creek flood control project in Denver and Aurora.

We are anxious to have the apparent impasse concerning the issue of non-federal contributions for project financing resolved. Should Congress elect to adopt new requirements in this regard, we would call to your attention the readiness of Colorado to consider financial participation in the construction of the Narrows and Animas-La Plata projects. The Colorado General Assembly has already made monies available for this purpose.

Bureau of Reclamation (Water Development Projects)

For those items already included in the President's recommended budget, we urge that Congress maintain the funding levels requested. In particular, we support the requested funding for continuation of projects under construction (i.e., the Closed Basin, Dallas Creek, Dolores, Fryingpan-Arkansas, Orchard Mesa, and Uncompahgre projects). The President's recommended budget is adequate for the timely execution and continuation of these reclamation projects.

We would caution, however, that any reductions in the President's budget request, particularly for construction activities, would be detrimental to the water users of the State of Colorado and, in the instance of the Closed Basin project, to the interests of the states of New Mexico and Texas as well. In this regard, failure to pass an appropriations bill for FY 84 would hamper ongoing construction. The continuing resolution for FY 83 has caused some problems, although the recent passage of the jobs bill may ameliorate some of these.

We take exception to the President's recommended budget insofar as it does not contain funding for construction on the Narrows and Animas-La Plata projects.

The Narrows project was reauthorized by Congress in 1970. It will provide supplemental water to some of Colorado's most productive agricultural lands, municipal water to several rural communities, and significant recreational opportunities for the greater Denver-Metro area. Another project purpose will be flood control. Finally, secondary benefits will accrue to downstream water users in Nebraska.

The project was in a construction status in 1977 when it was included on the Carter Administration's hit list. At that time, activity on the project was suspended even though property acquisition and final engineering and design work were under way. In the last two fiscal years, the Bureau has updated the planning for the project, which activities will be completed by the end of the current fiscal year. Thus, it will be possible to reinstate construction during FY 84. We respectfully request that $5,000,000 be appropriated for the Narrows Project.

The Animas-La Plata project, which was authorized in 1968, is a joint Colorado-New Mexico project designed, among other things, to address many of the problems which confront the Indian reservations in the project area. In addition, the project holds the potential of helping to resolve Indian reserved rights claims. Other components of the project will serve non-Indian populations in Colorado and New Mexico with municipal water. Finally, project water would significantly strengthen the irrigated agricultural economy of southwestern Colorado.

Planning and pre-construction activities for the project have been completed. In addition, the necessary repayment contracts have been negotiated and are in order. We respectfully request that at least $1,000,000 be appropriated to initiate construction on the Animas-La Plata project.

As you well know, it has been some years since appropriations were made for the initiation of construction on a water resources project. Colorado is gravely concerned about the present hiatus. If there are to be new requirements for non-federal, "up-front" financing, then they need to be defined so that the current impasse can be resolved. We are anxious to work with Congress and the Administration in considering this matter in order to reach a constructive solution on financing.

Should Congress ultimately elect to adopt new requirements for non-federal financing, we wish to draw to your attention the readiness of Colorado to proceed. The Colorado General Assembly has authorized the Colorado Water Resources and Power Development Authority, which is a political subdivision of the state, to consider financial participation in the Narrows and Animas-La Plata projects. Discussions are being held with the Department of the Interior in this regard. We await, however, Congressional direction on how to proceed.

We also want Congress to be aware of the fact that Colorado's other four authorized projects--Fruitland Mesa, San Miguel, Savery-Pot Hook, and West Divide--have our support. We will continue to search for ways to bring these projects to fruition.

The second item with which we take exception is the failure of the President's recommended budget to include general investigation funding for continued planning on the proposed Dominguez Reservoir project. The draft feasibility study released in December, 1981, indicates that use of the reservoir as a municipal and industrial (M&I) water supply facility deserves further study. We respectfully request that sufficient monies be appropriated in FY 84 to enable the Bureau to complete an analysis of this potential project. As the state continues to evaluate this proposed project, we will keep you informed of our views.

Bureau of Reclamation (Colorado River Water Quality Improvement Program)

The seven states of the Colorado River Basin have endorsed a coordinated, basin-wide approach to the reduction of salinity in the Colorado River. The salinity control projects being studied, planned, and constructed by the Bureau of Reclamation are an integral component of the overall salinity control program.

The President's budget request for this program contains less funding than requested by the Colorado River Basin Salinity Control Advisory Council in its 1982 annual report (dated February, 1983). Colorado supports the Council's recommendations. In addition, we would call your attention to the detailed testimony submitted on behalf of the seven states, acting through the Colorado River Basin Salinity Control Forum, in which testimony Colorado concurs.

Corps of Engineers

The sums contained in the President's recommended budget are, with the exception noted below, adequate for the timely execution and continuation of federal flood control programs in Colorado. We would caution, however, that any reduction in these budget requests would unnecessarily jeopardize the lives and properties of many thousands of Coloradans.

Especially important is the President's request for construction money for the South Platte River project below Chatfield Lake and for money for continuation of planning and engineering on the Fountain Creek project. Located in the heart of the Denver and Pueblo metropolitan areas, respectively, these are critical flood control projects. It is imperative that the construction which is being initiated in FY 83 on the South Platte River project be maintained on schedule thereafter and that planning for the Fountain Creek project proceed in a timely manner.

We take exception with the failure of the President's recommended budget to include funding for the Westerly Creek flood control project in Denver and Aurora. The sum of $200,000 is needed in FY 84 for continuing planning and engineering. This project is vitally needed to enable local governments in the area to proceed on their own to solve problems upstream from the proposed federal project, which would be located on Lowry Air Force Base. The upstream problems cannot be addressed until the federal project goes forward.

I appreciate the opportunity to appear before you. Thank you for your time and consideration.

ANIMAS-LA PLATA AND DOLORES PROJECTS

Senator ABDNOR. Once again, if you could state your name for the record.

Mr. HOUSE. Ernest House, I am the chairman for the Ute Mountain Ute Indian Tribe in Colorado. I have with me Henry Jacket, a council member with the Ute Mountain Tribal Council; I have also with me Clifford Whyte, the chairman for Water Task Force, that has been working diligently with the various people within the area of our reservation.

I am here today, Mr. Chairman, to ask for appropriations of $4 million for the Animas-La Plata water project and the continued construction of the Dolores project which requires $38.2 million. These two projects are a vital point in our life and our life on our reservation. It is a bloodline that we have. Without these two projects, it will be a fatal blow to the resources that we have.

I thank you for this opportunity to talk to you. Thank you.

[The statement follows:]

STATEMENT OF ERNEST HOUSE, CHAIRMAN, UTE MOUNTAIN UTE INDIAN TRIBE

Mr. Chairman and members of the committee, I am Ernest House, chairman of the Ute Mountain Ute Indian Tribe. This testimony is submitted in request that $1 million be appropriated in fiscal year 1984 for construction of the Animas-La Plata water reclamation project. Our tribe is also requesting that $37.2 million be appropriated to continue construction of the Dolores water reclamation project.

The Ute Mountain Ute Indian Tribe is centered in Towoac, Colo. The reservation is located in an extremely arid region of southwestern Colorado. Our people are plagued by poverty and the health and social problems that result from poverty. The lack of water for municipal use has required us to truck domestic water to our headquarters at Towoac. Though our lands are fertile, the lack of sufficient water for irrigation of our lands has often made the efforts of our farmers meaningless.

Both the Animas-La Plata and the Dolores water reclamation projects hold the promise of a new era for our people and for our neighbors. With your assistance, the lands in southwestern Colorado will become green; despair and frustration will be replaced by the assurance that present and future generations will have the means to prosper on our homelands.

Our people have historically worked in harmony with nature to survive. The projects envisioned for our region will harness the benefits of one of nature's essential elements in a manner that is environmentally sound. This partnership with nature will allow our children to preserve the integrity of our lands and our culture.

A great lesson can be learned from the ancient Anasazi peoples who occupied the structures of nearby Mesa Verde National Park. They did not have the means to survive in times of water shortages. With your assistance, we can protect against the likelihood of history repeating itself, and we hope that you act favorably upon our requests.

DOLORES PROJECT, COLORADO

Mr. PORTER. I am John Porter, manager of the Dolores Conservancy District, and there is a statement entered on my behalf. I am also a member of the Colorado Water and Power Authority, which is the State body that Mr. McDonald spoke to that would be involved in upfront cost sharing.

I am here to testify that Colorado is serious about helping to develop this water resource. For our agency to be able to participate in a project, it has to be authorized by the Colorado Legisla-ture. To date, there are two projects that have been authorized for us to participate in and they are the Narrows and the Animas-La Plata, and we are very desirous to work with your committee and the administration in furthering those projects.

[The statement follows:]

STATEMENT OF E. H. GILLILAND, SECRETARY AND DIRECTOR OF THE BOARD, DOLORES WATER CONSERVANCY DISTRICT

Gentlemen:

My name is Edgar Gilliland. I am Secretary and a member of the Board of Directors of the Dolores Water Conservancy District.

Also in attendance is John Porter, Manager of the District.

We appreciate the opportunity to appear here today. We would like to share with you our gratitude and concerns.

We are very much grateful for the past support this Committee has extended to the Dolores Project in the pas and we want to thank you for that support. We are also grateful that President Reagan has included in his proposed budget, $37.2 million for the Dolores Project. We concur with that request and urge your continued support and assistance.

The $ 37.2 million requested by President Reagan for FY 84 will enable us to accomplish the following:

1. At long last the McPhee Dam and the Great Cut Dike will be complete and initial filling of the reservoir can begin in the fall of 1984.
2. The Dolores Tunnel will be completed so the Agricultural water for the Ute Mountain Indian Tribe and the Montezuma Valley Irrigation Comany, in addition to Municipal and Industrial water for the City of Cortez and the Coummunity of Towaoc can be delivered from the McPhee Reservoir.
3. Clearing the debris from the active pool area in the McPhee Reservoir will be completed just prior to commencement of filling.
4. The new Dolores Sewer Treatment Plant will be completed. It's relocation is necessary because the old one is in the McPhee Reservoir area.
5. Work will continue on the delivery system for the Agricultural water for the 27,000 acres of full service land.The principal features involved are the Great Cut Pump Plant and Reach 1 of the Dove Creek Canal.
6. Work will continue of the access roads of the north side of the McPhee Reservoir, on the development of the recreation areas, on the construction of the Cultural Heritage Center, and of engineering and design of other Project features.

The budget amount recommended by the President is adequate to accomplish these objectives. We have the facilities, the man--power and the technical ability to use the money efficiently to reach these goals.

And now, the concern that I would like to share with you has to do with the Animas-La Plata Project. Our neighbors in La Plata County and our neighbors the Ute Mountain Ute INdians will benefit greatly from this project. The Ute Mountain Ute Tribe is searching for means of strengthening its economic base. This water development project is a prime factor in giving them the means to provide jobs and revenues for the tribe. The Animas-La Plata is obviously a key part of the plan. We strongly urge that the many benefits be considered and that the Animas- La Plata Project be funded for the beginning of construction in 1984.

I Thank you for your support.

SUMMARY

1. Budget proposed by the Administration includes $37.2 Million for continued construction of the Dolores Project in Fiscal 1984.

2. Dolores Project has many advatages:
   - A. Jobs!!! Peak of 600 in FY 83 and 700 in FY 84
   - B. Irrigation water for 61,000 acres.
   - C. Domestic and Irrigation water for the Ute Mountain Tribe.
   - D. Domestic water for The City of Cortez and the Town of Dove Creek.
   - E. Major recreation facilities available to all.
   - F. Restores permanent flow to a river now dry in the summer.
   - G. Includes measures to mitigate any negative impacts of the environment.
3. Overwhelming local support for and commitment to the Dolores Project.
4. Objectives for Fiscal Year 1984
   - A. Finish the McPhee Dam & Great Cut Dike.
   - B. Finish the Dolores Tunnel.
   - C. Finish clearing the McPhee Reservoir area.
   - D. Finish the Dolores Sewer Treatment Plant.
   - E. Continue work on the Great Cut Pump Plant and Reach 1 of the Dove Creek Canal.

F. Continue work on access roads north of the McPhee Dam.

G. Continue work on the recreation areas.

H. Continue the Cultural Heritage Center.

I. Continue engineering and design of other Project features.

5. URGE CONGRESS TO SUPPORT THE PRESIDENT'S PROPOSAL OF $37.2 MILLION FOR FISCAL YEAR 1984.

6. URGE CONGRESS TO SUPPORT START OF CONSTRUCTION OF THE ANIMAS-LA PLATA PROJECT.

ANIMAS-LA PLATA PROJECT

Mr. MURPHY. I am John Murphy, chairman of the Animas-La Plata Water Conservancy District board of directors. I am a resident of La Plata County, Colo., and former mayor of the city of Durango. I am here today to urge your support for the Animas-La Plata project and to provide funding in the amount of $1.0 million for a construction start.

I would like to digress from the prepared remarks for a minute to say that I think that I certainly understand the needs and benefits from the agricultural aspect of this project. I was born and raised on a farm, the so-called dry-side area where the land will benefit from irrigation. It has some of the most fertile soil of any place in the Nation. But year after year, before I left the farm at the age of 20, crops come up and get started and shrivel, die and die, because there was never enough water, year after year, to raise those crops where they could be harvested.

I also served for 9 years on the city council of Durango, Colo., serving as mayor some of the time during that period. I worked from 1974 until the present time on the existing project, working with the project to answer the future needs of the water for Durango and the surrounding area—municipal, industrial water. The water is badly needed by Durango which is right now an area growing quite rapidly and urbanizing. I also think that I am acquainted with and understand the needs and benefits of the Indian tribe, the Southern Utes and the Ute Mountain Utes for this water.

Mr. House has already spoken to this and I am sure Chairman Burch will in a minute. But this will help solve this Indian water right problem that Mr. McDonald referred to, not only in Colorado, but in the State of New Mexico. This project also serves municipalities and some agriculture in the State of New Mexico. It is, I think, one of the soundest water projects in the United States, and as Mr. McDonald made reference to, was authorized in 1968. So, we have been waiting and working since that day to get a start, to get construction started on this very, very important project.

Mr. McDonald referred to our frustration level being quite high and this is a very true statement. With that, I will conclude my remarks.

[The statement follows:]

STATEMENT OF JOHN MURPHY, CHAIRMAN, ANIMAS-LA PLATA WATER CONSERVANCY DISTRICT

Mr. Chairman and Members of the Committee:

I am John Murphy, Chairman of the Animas-La Plata Water Conservancy District Board of Directors, a life-long resident of La Plata County, Colorado, and former Mayor of the City of Durango. I am here today to urge your support for the Animas-La Plata Project and to grant funding in the amount of $1,000,000 for a construction start.

Our water district was formed March 6, 1981, by the District Court of the Sixth Judicial District of Colorado. Subsequent to that time, opponents of the Project filed a suit in federal court to declare that the Water Conservancy Act of Colorado was unconstitutional. The Colorado Legislature affirmed its belief in our Project by reconfirming our existence in passing House Bill 1272 by an overwhelming majority. The point of this story is that opponents of the Project know that delay is fatal to Animas-La Plata Project realization. A handful of people can create havoc, undermine the democratic process, and prevent an election on the repayment contract. In my mind, this is the worst sort of activity, and yet our only form of redress is to proceed through the system. I am honored to do this because I feel that your sense of fair play and equity will not allow a few to forestall the needs of the majority, the victims of this fringe group activity.

Obscured by these opponents are the true merits of the Animas-La Plata Project. It is a Project which will take the waters of the Animas River, the only major river of the state to never have a call on its waters, and apply them to a semi-arid region of rich soils aptly known as the "dry side". It will create a stable agricultural economy, and insure that children who grow up in this area will have jobs and may remain here.

The project waters will also be utilized to bolster the City of Durango's water supply. The City has recently embarked on an ambitious program of annexation and has realized a 40% population increase in many of its service areas from 1970 to 1980. The growth has not abated, and experts hired by the City have recommended that it meet its future water needs through utilizing project waters. In addition, much of the City's water would be diminished if reserved Indian water claims were adjudicated. The Project, by quantifying the Southern Ute and Ute Mountain Ute Indian tribes' claims, would protect and guarantee adequate water to meet Durango residents' needs.

The Animas-La Plata Project would also assist tourism, the number one growth industry in our area. The Ridge's Basin Reservoir would create a wonderful water based recreation area just three miles from the city limits and, further, would assist in making Durango a destination oriented tourist stop.

As I mentioned earlier, I am a life-long resident of this area, and as such, I have visibly witnessed the importance of water to us. In dry years crops fail, bills are not payed, banks foreclose, and people are dispossessed. We must insure that this cruelty does not reoccur and we must utilize our resources so as to protect every citizen from ruin because of natural phenomenon beyond his control.

The Animas-La Plata is worthwhile and reasonable, but without a construction start in fiscal year 1984 it is imperiled. Please do not let delay caused by a few, delay lifegiving benefits for the many. Our fate, our dreams, our security are in your hands. I trust you will not let us down.

Mr. BURCH. I am Leonard Burch, chairman of the Southern Ute Tribe. The vice chairman of the Southern Ute Tribe, Mr. Chris Baker, is in the audience.

Senator ABDNOR. We welcome all the gentlemen that are here with you who are not at the table. We are happy to have them present for the hearing.

Mr. BURCH. Again, as mentioned by my colleagues here, we are requesting a small amount of money in the amount of $1 million to start a project that was authorized in 1968. So we have been coming back here, Mr. Chairman, for 14 years, 15 years, asking for startup funds on the Animas-La Plata project. We want to continue to work with our non-Indian neighbors in seeing that this project be started and developed because it does mean quite a bit to my people, the Southern Ute, and the Ute Mountain Tribes, the two tribes in southwest Colorado, and some of our neighbors, farmers that we have worked with for the past many, many years on this project. I wanted to mention to you that if this committee adopts the needed start up funds in the amount of $1 million, this will certainly be beneficial to the people in southwest Colorado and, in particular, as I mentioned, to the two Ute Indian tribes in the State.

I wanted to show you Mr. Chairman, that we have some people out in the audience here, who are with me, who are as someone said, cowboys and Indians are working together. So I would like to have them stand up.

Senator ABDNOR. Let's have them all stand up.

[The statement follows:]

JOINT STATEMENT OF LEONARD BURCH, CHAIRMAN, AND CHRIS BAKER, VICE CHAIRMAN, SOUTHERN UTE INDIAN TRIBAL COUNCIL

Mr. Chairman and Members of the Committee:

I am Leonard Burch, Chairman of the Southern Ute Indian Tribal Council. I have with me Chris Baker, Vice Chairman of our Tribe. Once again I am privileged to appear before you to express the support and commitment which the Southern Ute Indian Tribe has for the Animas-La Plata Water Reclamation Project. Our Tribe and our non-Indian neighbors need this project to be constructed, and we are requesting that $1,000,000 be budgeted for fiscal year 1984 to commence that construction.

In 1968, when Congress authorized construction of the Animas-La Plata Water Reclamation Project, I felt that our Tribe had won a major victory. Every year since that time the Southern Ute Indian Tribe has appealed to our government in Washington, D.C. for assistance in project planning and construction. Although we have seen other water projects such as the Central Arizona Project, also authorized in 1968, near completion, our patient efforts have as yet been unsuccessful. With all respect, we urge you to keep the promise which Congress made to our people in 1968 when it authorized the building of the Animas-La Plata Project.

The Animas-La Plata Project will give us the means to develop a stable economy. The Southern Ute Indian Tribe and our sister tribe, the Ute Mountain Utes, will receive waters to place lands under irrigation. In addition, the Tribe will receive enough municipal and industrial water to develop vast coal reserves located on the reservation. We have repeatedly expressed our willingness to use this water rather than pursue legal claims to water under the Winters Doctrine. Even the state of Colorado concedes that success in such litigation would be almost inevitable. The impact of such water claims would be devastating not only to the municipalities and farmers whose historic water use would be curtailed, but also to the regional cooperation between Indians and non-Indians that has taken many years to build. By storing water in the two major reservoirs envisioned in the Animas-La Plata Project, area cities, farmers, and Indian tribes will have enough water to flourish compatibly.

On a much smaller scale we have seen the benefits of cooperation through water storage. In 1930, a federal court examined our treaties and awarded our tribe 200 cfs of water from the Pine River, a small tributary of the San Juan River. Rather than displace neighboring non-Indian farmers, all factions worked together through the Bureau of Reclamation to build the Vallecito Reservoir. Only last year the final repayments to the federal government were made by all participants to complete the Vallecito project.

Your appropriation of $1,000,000 to commence the Animas-La Plata Project will be a major step in conserving a critical resource for our region. It will also serve as an important commitment to Indian people that through cooperation and faith in our government difficult problems can be solved without the destruction that comes with bitter confrontation. Thank you again for allowing us the opportunity to testify before you.

Senator ABDNOR. We appreciate the efforts you gentlemen are making.

Mr. McDONALD. Mr. Don Hamil, president of the Lower South Platte, will speak briefly to the Narrows project, and that will conclude our appearance.

Mr. HAMIL. Thank you Mr. Chairman. I am Donald W. Hamil, president of the Lower South Platte Water Conservancy.

With me today are William Hemphill, the director of the organization, and Gary Friehauf, our secretary-manager of our district.

Mr. Chairman, and members of the committee, whereas I stated it is an honor to appear before you, I want it clearly understood that being here is a responsibility to the 30,000 to 40,000 citizens who live within the Lower South Platte District to make every reasonable effort in pursuit of construction of the Narrows unit. These are people who formed our district in 1964 for the singular purpose of providing an entity through which the construction of the Narrows project could be coordinated and to provide a legally constituted entity to participate in the long-time recognized Bureau of Reclamation cost-sharing program through repayment contracts. These people placed a tax burden upon themselves in faith that Narrows would be constructed. To date, we have spent over $2 million in local tax funds in support of Narrows.

The Narrows is the key to our future. Conservation of water can only be accomplished through storage. Construction of the Narrows Dam and Reservoir is the immediate need. That storage facility will be the tool which will enable us to manage our water and to meet the needs of tomorrow.

The Narrows unit was authorized according to the rules and regulations. The Lower South Platte District is doing everything in its power to live up to the requirements of the reclamation law as set forth by the Congress. We have a repayment contract with the United States and it is our belief that Narrows construction should proceed according to the standing law and rules. However, should the Congress decide on a different form of cost sharing, different from the current repayment program, we assure you that we are ready to work with you in the development of such a change.

Further, the district has applied for and received a preliminary permit from the Federal Energy Regulatory Commission. The purpose of this preliminary permit is to maintain priority of the application for license during the 36-month term of the permit. Narrows authorization does not include development of hydroelectrical generation as a part of the Federal project. The district knows that electrical generation could not provide adequate funds to construct Narrows, but believes future development will prove to be feasible. Funds produced could be used to help with operation and maintenance costs, further improvement of the irrigation facilities, enable the district to make annual payments to the United States, or, if the Congress so determines, help with payment of up-front cost sharing.

In testimony presented in previous years, we have informed this committee about the hardships the extremely protracted construction period for the Narrows has had on those people living within the project lake area. Once again we ask you to reflect on their plight. In fairness to them, land acquisition and construction must be resumed.

In fiscal year 1982, through the efforts of this committee, Congress directed the administration to prepare Narrows for construction. Your action gave us a renewed faith that Congress will carry out the intent of the project authorization and the repayment contract. In compliance with the congressional directive, the Bureau has reprogramed $1 million in fiscal years 1982 and 1983 for that effort. The Bureau work schedule calls for first construction activities to begin in fiscal 1984.

We were extremely disappointed the administration did not request construction funding for Narrows in their 1984 budget proposal. However, looking back to 1982, the membership of this committee and of the Congress demonstrated the necessary leadership. We look to this committee once again for the leadership, once again for the directive to the administration, once again provide an appropriation and resume construction of the Narrows.

Last, of all the States in which projects were planned and authorized as a part of the Missouri River basin project, to my knowledge Colorado is the only State which has not enjoyed the benefits from the completion of at least one unit.

Narrows is needed, Narrows will provide many diversified benefits, the Narrows is ready for an appropriation for construction. We sincerely request your favorable decision. Our future is contingent upon your support and efforts.

[The statement follows:]

STATEMENT OF DONALD W. HAMIL, PRESIDENT, LOWER SOUTH PLATTE WATER CONSERVANCY DISTRICT

I am Donald W. Hamil, President of the Lower South Platte Water Conservancy District. It is an honor for me to appear before this distinguised committee today to once again submit our appeal for construction funds so that the long awaited Narrows Unit - Colorado, a participating unit of the Missouri River Basin Project, can proceed to construction.

The Lower South Platte and Central Colorado Water Conservancy Districts continue to support construction of Narrows and are engaging in numerous activities with the Bureau of Reclamation in anticipation of resumption of construction in FY 1984.

My oral testimony will summarize the following written testimony, but I request that a full copy of the written testimony be entered into the record.

Mr. Chairman and members of the committee, whereas I have stated it is an honor to appear before you, I want it clearly understood that being here is a responsibility, to the thirty to forty thousand citizens who live within the Lower South Platte District, to make every reasonable effort in pursuit of construction of the Narrows Unit. These are people who formed our district in 1964 for the singular purpose of providing an entity through which the construction of the Narrows could be coordinated, and to provide a legally constituted entity to participate in the long time recognized Bureau of Reclamation cost-sharing program through repayment contracts. These people placed a tax burden upon themselves in faith that Narrows would be constructed. To date we have spent over two million dollars in local tax funds in support of Narrows.

Responsibility comes in other forms too, I have grandchildren and grandnephews and grandnieces. I have responsibility to those youngsters and the children and grandchildren of every constituent citizen, to pursue development of our very precious natural resource, the water of the South Platte River.

The Narrows is the key to our future. Conservation of water can only be accomplished through storage. Construction of the Narrows dam and reservoir is the immediate need. That storage facility will be the tool which will enable us, to manage our water, and to meet the needs of tomorrow.

Narrows will provide multi-state benefits. Many of the direct beneficiaries of Narrows are Coloradoans; however, Nebraskans will benefit also. One of Narrows purposes is to provide flood control storage. Members of this committee are familiar with the river systems of the East and Northwestern regions of our country. You are fully familiar with flood control benefits. I ask your particular attention at this time to Narrows project. Narrows reservoir will include 233,000 acre feet of storage space for flood control. Because the South Platte River Basin is in a semiarid region, this storage will provide significant ancillary benefits through the controlled release of those flood waters for later irrigation use, benefits from flood control and additional benefits from use of the water for agricultural, and energy production. The citizenry of the Platte valley in Colorado and Nebraska will enjoy benefits from the Narrows.

Nebraska has expressed support for construction of Narrows by resolution of the state legislature, through resolutions of several irrigation and power districts, and efforts of natural resources districts. Copies of these resolutions have been placed in the record in 1981.

Construction of Narrows is an investment in the continued growth of the economic welfare of the area and the country. A review of the Colorado Frying Pan-Arkansas project clearly demonstrates that construction of water projects in Colorado spreads economic good fortune to every region of the country. Contractors from Idaho, California, Iowa, Kansas, and other states were awarded contracts to perform work on that Colorado project. Material suppliers from Washington to New York received orders. Thus it is clear that construction of Narrows will provide economic opportunity to Colorado and at the same time create economic opportunity and jobs for the industrial regions of this great nation.

The Narrows Unit was authorized according to the rules and regulations. The Lower South Platte District is doing everything in its power to live up to the requirements of the reclamation law as set forth by the Congress. We have a repayment contract with the United States and it is our belief that Narrows construction should proceed according to the standing law and rules. However, should the Congress decide on a different form of cost-sharing, different from the current repayment program, we assure you that we are ready to work with you in the development of such a change.

The Colorado General Assembly reaffirmed its support through Joint Resolution, and has given direction to an agency within the state to negotiate terms for up front cost-sharing, if that should be in line with congressional desires.

Two studies were completed in 1982, which further reinforced the need for storage and reinforced the selection of the Narrows as a reclamation project. The first study was commissioned by the Department of Interior. It assessed the potential developments of the total basin in Colorado. The result was clear, Narrows was a well founded project and would not detract from other potential development. The second, commissioned by the State of Colorado addressed the economics of site specifics. It too proved the value of the Narrows as a reclamation project.

Further, the district has applied for and received a preliminary permit, OEP #4906 CO, from the Federal Energy Regulatory Commission. The purpose of this preliminary permit is to maintain priority of the application for license during the 36 month term of the permit. Narrows authorization does not include development of hydro electrical generation as a part of the federal project. The district knows that electrical generation could not provide adequate funds to construct Narrows, but believes future development will prove to be feasible. Funds produced could be used to help with operation and maintenance costs, further improvement of the irrigation facilities, enable the district to make annual payments to the United States or, if the Congress so determines, help with payment of up front cost-sharing.

However, we know that the Narrows Unit must become a reality before electrical generation can become a real potential. The district is in constant contact with the Bureau and are making every effort to assure Bureau construction designs will accommodate a generation unit.

In testimony presented previous years, we have informed this committee about the hardships the extremely protracted construction period for the Narrows has had on those people living within the project take area. Once again we ask you to reflect upon their plight. In fairness to them, land acquisition and construction must be resumed.

In fiscal year 1982 through the efforts of this committee, Congress directed the administration to prepare Narrows for construction. Your action gave us a renewed faith that Congress will carry out the intent of the project authorization and the repayment contract. In compliance with the congressional directive the Bureau has reprogramed one million dollars in FY 1982 and 1983, for that effort. The Bureau work schedule calls for first "construction" activities to begin in fiscal 1984.

We were extremely disappointed the administration did not request construction funding for Narrows in their 1984 budget proposal. However, looking back to 1982, the membership of this committee and of the congress demonstrated the necessary leadership. We look to this committee once again for the leadership, once again for the directive to the administration, once again provide an appropriation and resume construction of the Narrows.

Lastly, of all the states in which projects were planned and authorized as a part of the Missouri River Basin Project, to my knowledge, Colorado is the only state which has not enjoyed the benefits from the completion of at least one unit.

Narrows is needed, Narrows will provide many diversified benefits, the Narrows is ready for an appropriation for construction. We sincerely request your favorable decision. Our future is contingent upon your support and efforts.

STATEMENT OF THE CENTRAL COLORADO WATER CONSERVANCY DISTRICT

It is a great privilege for the Central Colorado Water Conservancy District to submit this written statement in support of the Narrows Unit of the Pick - Sloan Missouri Basin Program, South Platte Division, Colorado. Additionally, on this date oral testimony summarizing the needs of the local people, whom we represent, and the State's position have been presented to the Subcommittee.

The Narrows Project remains an essential factor in meeting the water needs of the South Platte River Basin. We submit today that the project is needed much more now than it ever has been. In submitting this statement, we respectfully implore each committee member to consider the regional differences between the needs of semi-arid Colorado and other areas of our country.

The Narrows Project becomes more important to our area daily because the needs of the region are changing so quickly. Narrows is now a project for all the people of the eastern slope; farmer and unbanite alike.

How can the Narrows Improve Regional Agriculture? Besides the many and varied benefits of a large multi-use project, Narrows will contribute greatly to existing agriculture. But, according to the study Agricultural Land Conversion in Colorado, published by the Colorado Department of Agriculture, "Renewable irrigated acreage served by renewable water supplies is no higher now than it was in 1959." And "2/3 the value of all Colorado crops is based upon irrigation." The Narrows project would provide 'security through storage' to existing producers while opening new lands to production.

Also mentioned in the study, "Eighteen percent of Colorado's current irrigated acreage (503,000 acres) depends upon nonrenewable groundwater. Most of this acreage (406,000 acres) is located in the eastern high plains above the Ogallala aquifer." It should come as no surprise that falling water tables are endangering the production of this area.

We submit that recharge of the Ogallala or surface water deliveries is possible with South Platte River water, but impossible without large scale storage (Narrows).

How can Narrows Aid in Orderly Population Growth? Our current population of 2.7 million is growing at an annual rate of 2.75 percent --- nearly three times the national rate. According to a recent study of the Department of Housing and Urban Development, "Front range population is expected to increase by one million residents by the year 2000. This growth will require an additional 200,000 housing units between 1985 and 2000."

Clearly, these new residents will need water. Rather than the present practice of cities acquiring senior agricultural water rights for human consumption, new and dynamic practices of sharing our water resources will come forth, if there is storage!

The Narrows Project, over time, will develop a tremendous volume of water which can be shared by urban and rural water users, through orderly and accepted exchange procedures.

Today, we ask for the help of the Federal Government to fund this extremely important project.

Local financial support is a part of the Narrows Project financing. Local front-end money has been a part of Narrows planning and design studies since the formation of this District in 1965. The taxpayers of the area have been financially supporting this project through their taxes. They have demonstrated further support through the willingness to contract with the United States for repayment of the project's costs as prescribed in the acts of this Congress. The District has a contract to pay the United States Treasury almost $91,000.00 per year for our apportioned share.

Greater payments will be made to the United States as the values of the agricultural commodities change. The water service contract meets the administration's objectives in the area of repayment also. The repayment escalator clause assures that the United States will receive a fair payment on their wise investment.

Colorado strongly supports the Narrows Project. The Governor and the State Legislature have recognized the increasing importance of the development of the water resources in meeting the demands placed on Colorado by the energy crises, food production, and foreign exchange of agricultural commodities. To meet these demands, the Colorado State Legislature established a fund to meet the financial requirements for the development of Colorado's water resources. Monies would be available from this fund to meet the state's share of the construction costs for future federal projects and other purposes.

Most recently, the cities of Brighton, Fort Lupton, La Salle, Keenesburg, and Wiggins, which represent nearly to 75,000 people, have requested 3,700 acre-feet of water from the Narrows Project for municipal and industrial purposes. The urban segment of Colorado is fully aware of the importance of acquiring useable water for projected growth along the Front Range. Narrows provides a viable option for this group.

At this point we raise the question of the contract as it represents the honor and word of the United States Government. As earlier mentioned, this sponsoring District executed a repayment contract with the Secretary of the Interior, on July 27, 1976. Since the initiation of the most recent activities on the Narrows in 1958, the people of the South Platte Valley have held this engagement with the Department of Interior to be one of honor and good faith. The contract representing the good faith of the United States to pursue the completion of the Narrows Unit. Throughout the intervening 23 years we have complied with the laws of this honorable Congress and every mandate of successive Presidents from John F. Kennedy. We have consented to demands for changes by federal agencies. Many of which did not benefit the water user but which increased the project cost for the water users. There have been no major changes in reclamation law to date. Yet, we are kept from achieving this valid goal. The people have spent years of time, hundreds of thousands of dollars, and have made the contractual commitments. We submit that the actions of the current administration suggests that this contract, the word of the United States, is meaningless.

Our appeal to this committee for funding includes an appeal that the contract and the word of the United States be restored to an elevation of honor and meaningfullness.

Energy is the most critical issue in this country today. Denver, Colorado is being looked upon as the energy capital of the country. The United States must take progressive and immediate action to eliminate our dependency upon foreign energy. This means development of coal and oil shale. Denver will be the hub of this essential development. The increase in population is going to have a major impact on the "normal" or "base" water supply of our area. This places further importance on the ability to capture the more unusual flows of large volume.

In summary, we appeal to Congress to:

Appropriate necessary funds for the reinitiation of construction activities on the Narrows Project for FY-1984.

Senator ABDNOR. Thank you Mr. Hamil and all you gentlemen, we appreciate your traveling such a long distance to testify. We certainly know your frustration of waiting. My State has waited a long time since the 1944 Flood Control Act that authorized some of our water development projects.

We have some very difficult decisions that the committee is going to arrive at in the very near future and your testimony today is very valuable in reaching those decisions. I am sorry that more of the committee could not be present to hear your testimony. We are starting up right after the recess. This has caused some trouble, but I can assure you that your entire written statements, plus the testimony that you have given today as a part of the record, will all be reviewed very carefully as we take up these various projects and the decisions have to be made.

We do thank you all for being here today. It has been a good hearing and we thank you.

Any additional supporting statements will go into the record as well.

[The statements follow:]

STATEMENT OF FRED KROEGER, PRESIDENT OF THE BOARD OF DIRECTORS, SOUTHWESTERN WATER CONSERVATION DISTRICT OF COLORADO

Mr. Chairman and Members of the Committee:

I am Fred Kroeger, President of the Board of Directors of the Southwestern Water Conservation District, and member of the Colorado Water Conservation Board. As a member of these boards, and as a native of southwestern Colorado, I assure you that there is no decision that will have a greater impact on me, my children, and my grandchildren than the decisions I come to discuss with you today.

The Dolores Project is under construction. I am pleased to note that the administration has requested $37,200,000 for continuing construction monies. This is an extremely effective and worthwhile project and your support of it is most justified. Additionally, those factors which give worth to the Dolores Project are many of those same considerations which make another project in our area, the Animas-La Plata, deserving of construction. Like the Dolores Project, the Animas-La Plata Project addresses Indian reserved water rights, is environmentally sound, and will create economic stability in some otherwise terribly economically depressed areas.

The unemployment rate on the Southern Ute Indian Reservation is in excess of 45%. This figure is astonishing when considering that the tribe owns vast natural resources, more specifically coal. The Southern Ute Indian Tribe has coal reserves estimated from 116,000,000 to 400,000,000 tons. Project waters have been allocated for coal development. However, without the water to assist in this development, these resources cannot be utilized, and tribal members cannot find employment.

The tribe could turn to its reserved water rights to solve this dilemma, but it, and the Ute Mountain Ute Indian Tribe, have agreed to a specific amount of project water as their share. If the Animas-La Plata Project is not constructed it seems inevitable that Indian reserved water claims will have to be honored. In our area of scarce water resources the impact is potentially devastating. Therefore, this project is needed not only to supply water, but also to maintain already existing water use.

The Animas-La Plata Project will also contribute greatly to the economic stability of non-Indian citizens in our area. The soil quality is excellent and the topography is favorable. The result of utilization of project waters would be to create an excellent agricultural economy where a semi-arid region exists today.

The Animas-La Plata Project is also unique because it represents one of two projects on which the state has indicated it would be willing to share construction costs. This commitment speaks to the drought ridden condition of Colorado, and the legislature's continuing support of reasonable water conservation. The Governor's office has also been a consistent supporter of the Animas-La Plata Project and, if necessary, cost sharing as a partner with the federal government to make certain of the project's completion.

Finally, the Animas-La Plata Project is construction ready. Planning is complete and the Final Environmental Statement was filed with the Environmental Protection Agency in July, 1980, and the Definite Plan Report was approved in August, 1980. Further, the Animas-La Plata Water Conservancy District was formed and has begun negotiations for the repayment contract. All that this Project awaits is your funding.

The Administration has no monies allocated for this Project in its budget, but we urge you to allocate one million dollars for construction start. In these tight budget years you may feel it unwise to make this type of long-range commitment to a western water project. Let me remind you, however, that the commitment was made in 1968 when this Project was approved by Congress along with other Colorado River Basin projects. Other projects are being built while the Animas-La Plata has been shoved to the side. Yet, unlike grants in other programs, the Animas-La Plata will return most of its total cost, will create increased crop value, will supply additional energy resources, will provide new recreational opportunities, and will solve historic water problems.

I must urge you not only to support this Project with construction start funds, but to do it now, this year, fiscal year 1984.

I am not unmindful of the tremendous demands on the limited resources of our government, but the history of western water projects is one of repayment, growth in the tax base, economic stabilization, conservation, and ecological recognition. I thank you for your support of the Dolores Project, and I implore you to support the Animas-La Plata Project.

JOINT STATEMENT OF RICHARD DOSSEY AND PAT GREER, MEMBERS OF THE BOARD, LA PLATA WATER CONSERVANCY DISTRICT

Mr. Chairman and Members of the Committee:

We are Richard Dossey and Pat Greer, members of the Board of Directors of the La Plata Water Conservancy District and dryland farmers in La Plata County. We are direct beneficiaries of the Animas-La Plata Project since we live on the "dry side" and project waters are anticipated to alter the agricultural cycle dramatically.

Our Water District was first formed in 1944, but even prior to that time there was a continual effort to augment and control the water in our area. The nature of the water supply goes from flash flooding and high spring runoff to a bare trickle in the late summer months. Our ability to be sure of a harvest is often frustrated since what starts out as a healthy spring crop is stunted and dried by the autumn. The soil is some of the richest in the United States, but without adequate water it only provides a marginal existence. The problem is demonstrated, and the solution, adequate water through the Animas-La Plata Project, is known. The final step is the funding, and that is why we are turning to you.

We understand you have many requests for funding, but there are several factors which make this project unique. First, it has the support of all segments of the citizenry of both La Plata County, Colorado and San Juan County, New Mexico. Second, it will help resolve the reserved water rights claims of the Southern Ute and Ute Mountain Ute Indians in our area so that we can be secure in our water resources. Third, it is environmentally sound, the environmental impacts are determined to be minimal. The Ridge's Basin Reservoir will increase total recreation use. Fourth, it will lend economic stability to an area that is very dependent on income and capital outside our area. Most of the recent large developments have been dependent on outside monies to finance them. Also, the local economy is heavily dependent on the tourist dollar, so that the recession has severely curtailed visitors to our area. The agriculture economy will provide the economic self-sufficiency greatly needed in this corner of the state.

You, as elected representatives, must carefully weigh the use of public monies. We are not asking for an outright grant of money, but we are requesting that you give us the opportunity to repay you, for a most needed public works project. This is a project that will supply jobs immediately, and will create jobs for generations through the growth and stabilization of the economy. It is cost effective in monetary terms, it is worthy in human terms, it is an investment which will be repaid in many ways. The initial $1,000,000 of construction start monies for the Animas-La Plata Project is critical to our area. Thank you for your consideration.

Statement of Al Murdock, Vice Chairman, Durango, Colo., Water Commission

Mr. Chairman and Members of the Committee:

I am Al Murdock, Vice Chairman of the City of Durango Water Commission, a body which is charged with overseeing Durango's water concerns. The City of Durango has been consistent in its support of the Animas-La Plata Project, and the City Council has passed a resolution evidencing its wish to see the project come to fruition.

The demands on Durango's water have increased dramatically in the past ten years. Not only has there been a tremendous population increase within the city, but our service area surrounding Durango has grown at an even more rapid pace than the city. Both the elected and appointed officials of the city of Durango have voiced fear of having an inadequate water supply so the city hired the engineering firm of Black & Veatch to evaluate the water alternatives and need. Black & Veatch came to the conclusion that the Animas-La Plata Project was the best solution to Durango's water problems because of its county-wide benefits. The Durango Water Commission concurs in this conclusion.

Granting Indian water rights on the Florida River, a primary source of Durango's municipal water supply, would severely curtail Durango's ability to deliver water in all but the non-irrigation months. If a drought occurred, this shortage would be exacerbated, and it is not too alarmist to say that many families would be effectively dispossessed without lifegiving water. The Indians have agreed to a specific water amount under the project, thus ameliorating this issue.

The $1,000,000 construction start money for the Animas-La Plata Project is needed to insure a stable county-wide economy and consistent water source for people living and working in the Durango service area. Thank you for considering our very urgent request.

Statement of Brice Lee, Secretary, South Durango Water District, Colorado

Mr. Chairman and Members of the Committee:

I am Brice Lee, Board member of the South Durango Water District. Our water district, which was formed in 1965, serves the property south of Durango with water which is processed by the City of Durango. Our area is one of the fastest growing in La Plata County, and our support for the Animas-La Plata Project is based purely on a need for more water.

When our District was formed our 1.333 cfs water right was more than adequate for the needs of our users. In the ensuing eighteen years we have provided water to the major industrial park in the county, and to subdivisions totalling more than 2,000 dwelling units. As a result of these growing demands on our water, the South Durango Water District Board has requested 2,000 acre feet from the Ridge's Basin Reservoir and has voted to sign a letter of intent to purchase water from the Project.

The Animas-La Plata Project represents the only water source which will meet the demonstrated needs in our District. We feel it is environmentally sound and economically feasible. The $1,000,000 construction start request is not large, but will enable the Project to reach fruition after the years of planning and assessment. The balance of application of project waters between irrigation and municipal and industrial use is very equitable for all citizens of the county, and undoubtedly will enhance all areas of the economy.

We are relying on the Animas-La Plata Project to solve our service increases for the next five generations. We have no other source of water "on hold" in case this Project is not completed, because we have faith that you will agree with us that this is a fair and reasonable conservation of a scarce resource. The time to act, however, is now.

I want to thank you for your time and consideration. Any assistance you give us will be appreciated and, of course, we are certainly willing to bear a share of repayment for construction of the Animas-La Plata Project.

JOINT STATEMENT OF SARA DUNCAN, DON MICHAEL, AND RANDOLPH T. SCOTT, LA PLATA COUNTY COMMISSIONERS

Mr. Chairman and Members of the Committee:

The Commissioners of La Plata County have long recognized the need for the Animas-La Plata Project. Commissioners for the last fourteen years have given public support to the Project because the county-wide benefits are obvious and the county-wide need is critical. We are aware that there has been some opposition to this Project, but in our opinion the majority of county residents favor conserving our water resources and preserving our water rights.

We, like you, realize the grave responsibility elected officials bear in regard to the disbursement of public monies. We do not hesitate, however, to endorse the request of our fellow citizens of La Plata County for construction start funds for the Animas-La Plata Project. This is a project which will address the inadequate water supply suffered by the residents on the "dry side" in the La Plata River Valley. This Project will meet the needs of the municipal water users in Durango and in the water service areas outside of Durango. The county had a forty percent growth rate from 1970 to 1980, and the current increase in population is proceeding at the same pace. It is incumbent that a secure water resource be identified to meet this growth. The Animas-La Plata project water would accomplish just this.

The dry land farmers of La Plata County are in great need of assistance. The vagaries of the weather often destroy crops, or at a minimum, diminish crop values. Agriculture is an important economic factor in La Plata County and we can foresee the tremendous boost to the economy if a consistent supply of water is secured through the Animas-La Plata Project.

Our county is fortunate to be the home of the Southern Ute Indian Tribe. Tribal support of the Animas-La Plata Project has been unswerving. The tribe has committed to a definite amount of water from the Project which helps avoid any confrontation over reserved water rights. Additionally, the tribe has suffered from terrible unemployment, and will be unable to develop their proven coal reserves or irrigate their otherwise fertile lands.

Finally, La Plata County is heavily dependent on tourism, and the Ridge's Basin Reservoir will provide a much needed water based recreation area in the heart of the county.

Thank you for your time and consideration. We know that construction start funds for the Animas-La Plata Project will be well spent, and we hope there will be no further delay in putting our water to work.

STATEMENT OF KEN GOOD, MAYOR, AZTEC, N. MEX.

Members of the Subcommittee:

We, the undersigned, representing the three New Mexico municipalities involved in the Animas-La Plata Project under the Colorado River Storage Project Act of September 30, 1968 (82 Stat. 996), to be built by the Bureau of Reclamation of the Department of the Interior, wish to go on record in support of the Project conditional upon a satisfactory cost sharing formula and contractural agreements being negotiated with the Bureau of Reclamation. As you know, the Animas-La Plata Project is proposed for the storage, diversion, salvage and distribution of the waters of the Animas and La Plata Rivers for, among other things, municipal and industrial use.

Clearly, the reasonable, long-term availability of water to our communities has a significant impact on growth and development in our region which is a major supplier to our nation of gas, oil, coal and electrical energies. We thank you in advance for your positive consideration of the Animas-La Plata Project.

Respectfully submitted,

Ken Good
Ken Good, Mayor
City of Aztec, New Mexico

Dee J. Montano
Dee J. Montano, Mayor
City of Farmington, New Mexico

Erva Lynch
Erva Lynch, Mayor
City of Bloomfield, New Mexico

STATEMENT OF F. F. (CHANO) MONTOYA, PRESIDENT, LA PLATA, N. MEX., WATER CONSERVANCY DISTRICT

Mr. Chairman and Members of the Committee:

I am F. F. Montoya, Chairman of the New Mexico La Plata Conservancy District and landowner in the La Plata River Valley in both New Mexico and Colorado.

The La Plata River goes dry every year, and yet with flash floods and spring runoff, we see adequate water go to waste. It is a source of continual frustration to constantly be in need of water without being able to control it. Because of this, we are greatly in favor of the Animas-La Plata Project.

The Project has many features which we feel are invaluable, not the least of which is flood control. While this is not the prime motivation for this Project, it will certainly prevent much of the flood damage we routinely suffer. Also, 8,300 acres of land in New Mexico will be irrigated so that the harvest will be assured, and we need not see our crops shrivel and dry as the summer continues without rain. Further, the municipal water supplies of Aztec, Farmington and Bloomfield will be increased and the growth in our area accommodated. This part of New Mexico is energy rich and the constant water supply will help stabilize an economy now subject to boom or bust periods in the oil and natural gas fields.

New Mexico and Colorado, as well as local governments in both states, have worked closely together to bring this Project to fruition. The reason for this cross boundary commitment is because the needs are so great and the returns are immeasurable in terms of the human resources. The people of our area would be able to make a living from otherwise marginal land.

I know you are busy and I thank you for your time and interest in our problems. The Animas-La Plata Project is cost effective in economic terms and is worthy in terms of human dimensions. Please do not forget us, the $1,000,000 construction start money will repay its investment many times over. Thank you.

ROBERT B. GRIFFITH PROJECT, NEVADA

Senator ABDNOR. The subcommittee has also received a prepared statement from the Colorado River Commission of Nevada which, without objection, will be made part of the record at this point.

[The statement follows:]

STATEMENT OF GOV. RICHARD BRYAN OF NEVADA

Mr. Chairman, Members of the Committee, I am pleased to see that the water development requirements of the residents of Southern Nevada are receiving favorable consideration by your Committee, and that positive action is being taken by the United States Bureau of Reclamation of the Department of Interior, the Colorado River Commission of Nevada and the local water-using agencies. The careful development, management and wise use of our water resources in the State of Nevada is critical to the well being of the citizens of our state.

The appropriation of the funds necessary to complete construction of the Second Stage of the Robert B. Griffith Water Project (formerly the Southern Nevada Water Project) is vitally important to Nevada. Your support of funding authorized by Public Law 89-292 will allow the State to meet the municipal and industrial water requirements of Southern Nevada and avoid adverse social, economic and environmental impacts.

Construction of the second stage of this Project is nearing completion. Federal contracts in the total amount of $99,075,181 have been issued to date. All funds appropriated for the Second Stage of the Robert B. Griffith Water Project under Public Law 89-292 are reimbursed with interest to the Federal Government. In this regard, I wish to point out that the State of Nevada, through the Colorado River Commission of Nevada, has made all first stage repayments for those facilities as scheduled.

The State of Nevada is actively sharing in the cost of the water resource development project. The State designed and completed the enlargement of the Alfred Merritt Smith Water Treatment Facility. Sixty million dollars of State General Obligation Bonds were sold to provide these necessary facilities for a complete municipal and industrial water supply system.

The decision to make water available to the people of Southern Nevada was confirmed by the passage of Public Law 89-292 in October of 1965. As a result of this action, appropriations were made which allowed the First Stage of the Project to be completed in 1971, supplying 132,200 acre feet of water per year allotted to the State of Nevada from the Colorado River. It was then anticipated that this water supply system would be sufficient until approximately 1990. However, our population growth and the rapid expansion of the area produced a larger demand for water, thus the necessity for the Second and final stage of the Project authorized under Public Law 89-292.

It is critical that the entire water system, including Federally-funded pipeline additions, pumping plants, and control system be completed as quickly as possible. All construction is coordinated between the Federal, State and local water users. I believe that each portion of the system required to deliver water to the people must progress on schedule in order to ensure efficient and effective use of Federal, State and local funds. Any reduction in funding that could delay construction will result in additional costs to the people of Southern Nevada, as well as jeopardize adequate water supplies.

It is for these reasons that Fiscal Year 1984 appropriations in the minimum amount of $937,000 are being requested. I respectfully urge that your Committee support this appropriation which is in the current Executive Budget under "Drainage and Minor Construction" for Fiscal Year 1984. I believe it is clearly a matter of record that the Project fully meets or exceeds all the criteria of a wise and prudent water resource development, including the tests of safety, environmental considerations and cost effectiveness.

Your continued support of this vital municipal and industrial water supply project is appreciated.

STATEMENT OF DUANE R. SUDWEEKS, DIRECTOR, COLORADO RIVER COMMISSION OF NEVADA

Mr. Chairman, members of the Committee, the Colorado River Commission of Nevada has statutory authority and contractual responsibility for administering the repayment contract for the first and second stages of the Robert B. Griffith Water Project (formerly the Southern Nevada Water Project). As the Director of the Commission, and in their behalf, I wish to extend our appreciation for the endorsement the House Committee on Appropriations has given to the development of this vitally needed water project authorized by Public Law 89-292. Further, I take this opportunity to ask the Committee to support the appropriation in the amount of $937,000 to assure the completion of this endeavor. This amount is included in the Executive Budget under "Drainage and Minor Construction."

Completion of the second stage facilities will allow Nevada to receive the total 299,000 acre feet per year through the Southern Nevada Water System, which consists of both the Robert B. Griffith Water Project and the Alfred Merritt Smith Water Treatment Facility. The first stage facilities, completed in 1971, were limited to 132,200 acre feet per year. The capability of the first stage facilities are expected to be exceeded during this forthcoming summer peak season. There does not exist a feasible alternative potable water supply other than the second stage facilities.

Both the first and second stages of the Southern Nevada Water System have been a highly successful joint Federal, State, and local effort. Federal appropriation, together with State funding authorized by the Nevada Legislature, and the investment of local funds for the receipt and distribution of the water from the system were constructed in a coordinated and parallel effort.

Under the authority granted by the Nevada Legislature, the Colorado River Commission of Nevada has sold $60,000,000 worth of State General Obligation Bonds to finance the costs of the enlargement of the treatment facilities, which was completed on May 3, 1982. In addition, approximately $30 to $40-million of local funds have been expended by the water receiving entities in preparation of receipt of second state water deliveries.

Each and every part of the Southern Nevada Water System has been coordinated and integrated to provide potable water deliveries to current and future residential, commercial and industrial consumers. No water from the Project is utilized for agricultural irrigation purposes.

From the above and in conjunction with our understanding that the Bureau of Reclamation has a capability of effectively and efficiently using $937,000 in Fiscal Year 1984, we again respectfully ask the Committee's support of this appropriation to complete the construction of the Robert B. Griffith Water Project.

83-4 RESOLUTION

COLORADO RIVER COMMISSION OF NEVADA

WHEREAS, the Southern Nevada Water Project was authorized in 1965 by Public Law 89-292 to help meet the water needs of the area and to reduce the demands on an already overdrawn ground water basin; and

WHEREAS, Public Law 97-381 renamed the Southern Nevada Water

Project in honor of Robert B. Griffith and said water project is hereinafter referred to as the Robert B. Griffith Water Project; and

WHEREAS, the First Stage of the Robert B. Griffith Water Project was completed in 1971 and currently delivers municipal water to the population center in Southern Nevada including Nellis Air Force Base, the City of Henderson, the City of North Las Vegas, the City of Boulder City and the Las Vegas Valley Water District; and

WHEREAS, the operational needs of this public water system to provide the additional potable water supply to the population it serves can only be accomplished by timely completion of the construction of the Second Stage of the Robert B. Griffith Water Project; and

WHEREAS, the State of Nevada has shared in the cost of this project by designing and constructing the State-owned water treatment plant which is an integral part of the total system and will operate in conjunction with the Second Stage of the Robert B. Griffith Water Project; and

WHEREAS, all Second State Federal funding will be repaid with interest; and

WHEREAS, funding has been provided in the Executive Budget under the Damage and Minor Construction portion of the construction program in the amount of $937,000 for continued construction of the Robert B. Griffith Water Project for Fiscal Year 1984;

NOW, THEREFORE, BE IT RESOLVED, that the Colorado River Commission of Nevada urges Congress to appropriate the Fiscal Year 1984 Executive Budget recommendation of $937,000 to complete the construction of the Second Stage of the Robert B. Griffith Water Project; and

BE IT FURTHER RESOLVED, that copies of this Resolution be sent to Senator Paul Laxalt, Senator Chic Hecht, Representative Harry Reid, Representative Barbara Vucanovich, Senator Mark O.

Hatfield, Chairman of the Energy and Water Development Subcommittee of the Senate Appropriations Committee; Representative Tom Bevill, Chairman of the Energy and Water Development Subcommittee of the House Appropriations Committe; Governor Richard Bryan; Secretary of Interior James G. Watt and Commissioner Robert N. Broadbent of the Bureau of Reclamation.

Adopted and passed on March 10, 1983.

JACK LEHMAN, CHAIRMAN

SUBCOMMITTEE RECESS

Senator ABDNOR. With that, the subcommittee will recess until 10 a.m. tomorrow.

[Whereupon, at 3 p.m. Tuesday, April 5, the subcommittee was recessed to reconvene at 10 a.m. Wednesday, April 6.]

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